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**Sectoral Growth Accounting and
Structural Change in Postwar Europe**

Research Memorandum GD-23

Bart van Ark

December 1995

Sectoral Growth Accounting and Structural Change in Post-war Europe

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December 1995

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1. Introduction

The role of sectoral performance in economic growth has been a topic of major importance in growth studies from Adam Smith and David Ricardo onwards. Some scholars claimed that the shift of employment from low productivity to high productivity sectors was one of the main factors behind the overall rise in productivity. For example, structural change was seen by Kuznets (1966) as one of the major stylized facts of growth, although in his view it was more encompassing than only changes in sectoral shares of employment and output. Chenery, Robinson and Syrquin (1986) defined structural transformation as "the set of changes in the composition of demand, trade, production, and factor use that takes place as per capita income increases" (pp. 31-32).

An alleged need for structural change is also mentioned frequently as a motive behind the promotion of European economic integration. According to its supporters, liberalization of trade relations and greater mobility of factor resources between member countries of the European Union is assumed to enhance structural change, with a positive effect on the growth of GDP and productivity.

To provide empirical evidence of the effect of sectoral change on economic growth during the post-war period, this paper analyses estimates of growth and levels of output and productivity by sector of the economy. For this purpose annual sectoral accounts on real output and employment for ten sectors have been constructed which together constitute the total economy (agriculture; mining; manufacturing; public utilities; construction; trade; transport and communication; finance, insurance and real estate; community, personal and social services; and government services) for eight European countries (Denmark, France, Germany, Italy, the Netherlands, Spain, Sweden and the UK) from 1950 to 1992. For the sake of comparison similar estimates are included for the USA, which go up to 1990.

The next section first discusses the concepts and sources used to obtain GDP and employment by sector. The complete annual series for real output and employment are shown in a statistical appendix to this chapter.

In section 3 the growth rates of labour productivity for four sub-periods (1950-60; 1960-73; 1973-79 and 1979-90) are discussed in more detail.¹ This section also presents measures of the extent to which shifts in employment between sectors accounted for the growth of labour productivity in the economy as a whole, as distinguished from productivity growth within the sectors.

¹ Although the series in the appendix go up to 1992, the analysis of the results in this paper concerns only the period 1950 to 1990. The year 1992 was a depression year in many countries, which would affect comparisons between beginning and end point estimates for the period as a whole and the most recent sub-period. My beginning and end point estimates are for relatively "normal" years in the business cycle.

In section 4, the focus will be on the extent to which labour productivity for four of the countries included (France, Germany, the UK and the USA) could be accounted for by changes in capital intensity and joint factor productivity. The capital stock estimates for eight sectors, which are based on the perpetual inventory method, i.e. the cumulation of investments with assumptions on asset lives and retirement patterns, are taken from O'Mahony (1993).

The study of structural change also greatly benefits from comparisons of levels of output and productivity between countries. Section 5 provides and discusses level estimates from the International Comparisons of Output and Productivity (ICOP) project for two commodity sectors (agriculture and manufacturing) and the residual part of the economy for four European countries (France, Germany, the Netherlands and the UK) in comparison to the USA.

2. Sectoral GDP and Employment: Concepts and Sources

Despite the continuous interest in the subject, the published statistical information on sectoral output and employment for the post-war period as a whole is incomplete. Several factors affected the comparability of the existing sectoral accounts across countries.² Since the early 1960s OECD has presented national accounts of member countries on a more or less comparable basis, but so far OECD did not undertake a backward revision of the sectoral national accounts estimates. As a result there are major breaks in the series in particular following the introduction of the System of National Accounts 1968. Thanks to the work of some national statistical offices and academic scholars, there is now scope to reconstruct sectoral accounts for the post-war period on a consistent basis for quite a number of countries.³

In this paper the use of the comparative framework as provided in the OECD *National Accounts*, Vol. II, is combined with more comprehensive national statistics to construct sectoral accounts on post-war output and employment. This attempt is not the first to provide a sectoral database for European countries. For example, at OECD there are two research projects on industry statistics. The International Sectoral Database (ISDB) provides information on employment, gross domestic product, investment, capital stock, employee compensation and imports and exports for around 30 branches for 14 OECD countries (Meyer-zu-Schlochtern, 1988, 1994). ISDB is mostly based on the OECD national accounts for output and employment, but gaps are filled with information from, for example, Eurostat's national accounts (CRONOS) and the OECD labour force statistics. ISDB goes back to 1960 although even for this

² The term "sectoral national accounts" should not be confused with "sector accounts" as sometimes used in another context. The latter shows separately the various kinds of transactions by institutional sectors and which are primarily distinguished to highlight differences in their financial role, behaviour and experience in the economy (United Nations, 1968).

³ See, for example, Danmarks Statistik (1992) for Denmark; Statistisches Bundesamt (1991) for Germany; Golinelli and Monterastelli (1990) for Italy; Prados (1993) for Spain; Feinstein (1972) for the UK; US Department of Commerce (1986, 1992) for the USA.

period the database has some gaps. Some scholars made extensive use of ISDB for total factor productivity studies (see, for example, Dollar and Wolff, 1993).

The second OECD data base is STAN, which provides similar information as ISDB but exclusively for manufacturing industries and at a more disaggregated level for 12 OECD countries from 1970 onwards (OECD, 1992, 1994). STAN, which also includes other indicators, such as statistics on trade, research and development, etc., is much used in industry studies.

Both ISDB and STAN aim at a maximum coverage in terms of sectors, countries and indicators used. In this respect the present attempt is less ambitious because it distinguishes only ten sectors and two indicators (output and employment). On the other hand both ISDB and STAN make only use of official statistics from national and international statistical bodies. Many of the data points, in particular STAN, are therefore estimated, as no official figures were available from the member countries. The present dataset uses a wider range of data sources than ISDB and STAN, including those from academic scholars.

In all cases priority was given to keep the sectoral accounts compatible with the macroeconomic accounts on GDP and total employment. The sectoral estimates can therefore be used in conjunction with estimates of GDP, employment and capital stock for the total economy, such as those from Maddison (1995, 1996).

Although the sectoral accounts were constructed on a consistent basis across countries, in practice they could not always be based on exactly the same concepts, the same industry classification scheme and the same type of sources. Below these aspects are discussed in more detail, but here a few general remarks will be made.

The sectoral disaggregation in this paper is largely according to the International Standard Industrial Classification (ISIC) which is also used by OECD:⁴

- 1) agriculture, hunting, forestry and fishing
- 2) mining and quarrying
- 3) manufacturing
- 4) electricity, gas and water
- 5) construction
- 6) wholesale and retail trade
- 7) transport, storage and communication
- 8) finance, insurance, real estate and business services
- 9) community, social and personal services, including hotels and restaurants
- 10) government services, including other producers

⁴ The major exception compared to the OECD classification is that, where possible, I transferred "hotels and restaurants" from "wholesale and retail trade" to "community, social and personal services", as I regard the productivity performance of hotels and restaurants rather different from that of the trade sector. See also note 5.

The distinction between community, social and personal services and government services was in some cases somewhat artificial, as the splitting of government and non-government services (in particular education and health) was not always unambiguous.

In cases where the national classification schemes differed very substantially from ISIC, the OECD national accounts were directly used. This was for example necessary for France where mining and manufacturing could not be separated in the national statistics and where various service activities were classified on an institutional basis instead of by activity.

The general approach was to depart from the GDP level for a benchmark year in the mid-1980s (usually 1985) expressed in that years prices. The series were subsequently linked to this benchmark figure. For the estimates of comparative levels of output and productivity between countries in section 5, the benchmark year was 1975.

For the analysis of the data in sections 3 and 4 the original ten sectors were collapsed into three broad sectors, i.e. agriculture (table A.1), industry (table A.2) and services (table A.4), although separate tables for manufacturing (table A.3), producer and distributive services (table A.5) and community and government services (table A.6) are shown as well.⁵

Finally in some cases where gaps in sectoral information could not be filled, in particular for the employment estimates of services during the early post-war period, I used a rather straightforward estimation procedure to disaggregate the published information to the ten-sector level. This method, which assumed the productivity movement to be equal to that of a neighbouring sector or a combination of sectors, was mainly used within services. It needs to be emphasised that these estimation procedures were only used to disaggregate the information and did not affect the aggregate information on output and employment itself.

GDP Estimates by Sector

According to Maddison (1996), "the international comparability of West European GDP estimates has improved markedly in the past fifty years", but "(N)evertheless there remain some problems which affect the comparability of the estimates". Some of the methodological differences in national accounting between countries, such as the use of different base years and the procedures to link series for sub-periods, affect the GDP estimates by sector in a similar

⁵ Here I follow the distinction made by Elfring (1988). Producer services include business and professional services, finance and insurance and real estate. Distributive services include retail and wholesale trade, transport and communication; personal services include hotels and restaurants and personal services; social services include government services and social services (including health and education).

way as the total economy estimates. However, other problems are of specific importance for the comparability of the sectoral accounts across countries.⁶

The methods of obtaining sectoral GDP estimates differ between countries. For example, output estimates for the UK and the USA are essentially derived from an overall income estimate of GDP. The GDP estimates for a benchmark year are then distributed over the different sectors on the basis of estimates from various primary sources, including production censuses and employment surveys. In contrast, GDP by industry of origin in Germany is directly constructed from industry statistics. In France and the Netherlands output, expenditure and income estimates are first made consistent within the framework of an input-output table.

In some cases (France, Germany, the Netherlands) the full accounting procedures are repeated annually, but for other countries (Spain, the UK, the USA) output by industry is extrapolated from a base year by production indexes for a period of five up to ten years before a new base year is introduced. In the past the latter procedure sometimes led to an underestimation of output growth, as it took insufficient account of the introduction of new products and of changes in the quality of products.⁷

Another difference in estimation procedures which affects sectoral accounts concerns the treatment of secondary activities. In most countries (in particular in those using input-output tables) output is distributed among industries on the basis of a clearly defined primary activity which takes place in an "establishment", which is defined as an activity unit within an enterprise. Secondary activities of enterprises are then reallocated to other industries. However, in Germany, the output of the whole enterprise, i.e. including secondary activities, was distributed on the basis of the primary activity. This issue hardly affects the estimate of total GDP, but it can be of greater importance at sectoral level. For example, in contrast to most other countries, repair and maintenance activities in Germany are included with manufacturing instead of with services.

Sectoral GDP in the accounts presented here is defined as the "gross domestic product including bank service charges". Before the introduction of the 1968 System of National Accounts bank charges were deducted for individual sectors, but since then the bank service charge has been imputed as the difference between property income received and interest paid by banks, and was not allocated to individual sectors. As a result the original estimates of GDP by sector for the earlier period were conceptually not quite the same as those for the most recent period, although for some countries (for example, for Denmark, Italy and the USA) the pre-1968 series have been adjusted. In any

⁶ For the discussion of differences in weighting procedures and adjustment for inadequate coverage, see for example Maddison (1996).

⁷ See van Ark (1993) for a sensitivity test of the series of UK manufacturing value added from 1950 to 1989 by comparing the official national accounts series with a series from the UK Census of Production deflated by a producer price index. It appears that the underestimation of output growth in the UK national accounts was particularly important for the period 1948-1973.

case, as mentioned above, all series are linked to the level estimates for a year in the mid-1980s.

Where possible, GDP measures are adjusted to a factor cost basis. The valuation at factor cost implies that indirect taxes on products (for example, value added tax, import duties and excise duties) and production (for example, levies etc.) are excluded, whereas subsidies on products and production are included in the estimates. The factor cost concept is derived from the value added at basic prices (which is gross output at basic prices minus intermediate inputs at purchaser prices) by deducting the net indirect taxes (i.e. indirect taxes minus subsidies) on production. For four countries my estimates are at genuine factor cost. In one case (Sweden) the estimates are at basic prices. The OECD national accounts usually show industry GDP at producer prices, which equals value added at basic prices plus net indirect taxes on products. In three cases (France, Germany and Spain) the estimates could not be adjusted from producer prices to a factor cost standard even though the series for Spain before 1980 were originally based on factor cost. In the case of the USA, the estimates are at market prices which means that all indirect taxes are included and subsidies excluded. These differences in valuation standards hardly affect the growth rates. In the case of the level comparisons in section 5 all estimates for 1975 were first adjusted to a factor cost basis.

Although the sectoral accounts are conceptually consistent with the macroeconomic estimates of GDP, the sum of the sectors does not always equal aggregated GDP as directly obtained from the OECD national accounts (see Maddison's chapter 4). One main source of difference is that adjustments for VAT and the deduction of bank service charges, which are made at the aggregate level, are not included in my aggregated sectoral estimates. However, in practice the difference in growth rates between the sum of the sectors and aggregated GDP is negligible, i.e. less than 0.1 - 0.2 percentage points of the annual compound growth rate for the period 1950 to 1990.

Labour Input by Sector

To provide standardized accounts of sectoral employment one can basically make use of two different primary sources, namely household surveys (for example, population censuses and labour force surveys) or establishment surveys (for example, production censuses or employment surveys). The former are at the basis of the OECD *Labour Force Statistics* (previously called *Manpower Statistics*), whereas the latter are mostly used as part of the national accounts, including the OECD *National Accounts, Vol. II*.

Employment estimates from household surveys have limitations when used in sectoral accounts. In household surveys the respondents' statement concerning the industry where he is employed is often not in accordance with the official classifications, in particular where it concerns employees in (semi-) government services, such as railways or postal services. Furthermore there are many multiple job-holders which are counted only once in the labour force survey according to their most important activity.

For sectoral accounts it is therefore preferable to estimate the number of employees per sector on the basis of returns from establishments. This means that one usually counts jobs rather than persons. During the past two decades the *OECD National Accounts, Vol. II* have provided figures on employment on a fairly comprehensive scale, but, as argued by Maddison (1996), these employment figures are supplied by the member countries without clearly defined guidelines to standardize them. Therefore, where possible this chapter makes use of national sources on employment which were consistent with the national accounts. This could be done for Denmark, Germany, Italy and Sweden, and the USA. For the other countries (for example France, Spain and the UK for the post-1970 period) the *OECD National Accounts, Vol. II* were used. In a few instances (for example in France and Spain for the pre-1970 period) the estimates were obtained from the *OECD Labour Force Statistics*.

For the Netherlands, which only provides figures on a man-year basis within the national accounts framework, estimates were obtained from labour force accounts and employment surveys for the period since 1973, and from the US Department of Labor (for manufacturing and the total economy) and van der Meer (1988) (for agriculture) for the period before 1973. The pre-1973 employment were divided up across the eight sectors on the basis of the distribution of the man-year estimates as reported in the Dutch national accounts.

Labour input in this paper is defined as "all persons employed", i.e. all paid employees and self-employed persons. Unfortunately, the treatment of armed forces is not fully consistent across countries, though it is mostly included. This is also the case for persons who own an enterprise but are temporarily not at work and unpaid family workers (see the country notes for more details).

There is still much scope for improving the estimates of employment by sector in terms of international comparability. So far only a few countries have reconciled their estimates of employment from production censuses, employment censuses and household surveys. However, despite the various problems outlined above, the growth rates of total employment aggregated from the sectoral level are mostly not very different from those in the macroeconomic accounts which are almost exclusively based on OECD labour force statistics (Maddison, 1996). However, the differences in terms of *numbers* of persons employed are in some cases quite substantial.

Sectoral statistics on hours worked are not provided in this paper. For growth accounting purposes one should preferably adjust measures of paid hours for time lost due to sickness, strikes, vacation, etc. (Maddison, 1996). These are only incidentally available for sectors such as agriculture and manufacturing and can seldom be obtained for all sectors of the economy. The estimation of annual hours worked is an area of great priority for future research and in particular for international standardization, as the reduction in working hours has accounted for a great deal of the changes in labour input, in particular during the 1970s and 1980s.

3. Productivity Growth and the Effects of Structural Change

Agriculture

Table A.1 shows that all countries except the Netherlands and the United Kingdom experienced a relatively slow growth in agricultural output compared to the other sectors of the economy. However, the slow output growth went together with a substantial decline in agricultural employment. This resulted in labour productivity growth rates which were higher than in any other sector of the economy for all nine countries except Spain.

Industry and Manufacturing

The industry sector (table A.2), which was dominated by manufacturing (table A.3), shows a more diverse development of output and employment across the countries than agriculture. Between 1950 and 1973 real output growth was relatively fast in Germany, France, Italy, the Netherlands and Spain, but slower in Denmark, Sweden, the UK and the USA. After 1973 all countries experienced a significant decline in industrial output growth, but it was still relatively fast in Italy and Spain.

For the period as a whole employment growth in industry was moderate. However, it was clearly positive in the period up to 1973, whereas it fell in all European countries after 1973. Only in the USA was the level of employment in industry and manufacturing in 1990 similar to that in 1973.

Labour productivity growth in industry and manufacturing was more diverse between the countries. During the 1950-73 period it was particularly rapid in France, Germany, Italy, the Netherlands and Spain, and relatively slow in Denmark, Sweden, the UK and the USA. All countries experienced a slowdown of productivity growth in the period following 1973, but the growth rates had become even more diverse than during the earlier period. The slowdown in Germany since 1973 is striking, as the country moved from a position of fastest growth in industry during the period 1950-60 to one of the worst performers during the period 1973-90. The Netherlands, Sweden, the UK and the USA showed faster productivity growth during the period 1979-90 than during the period 1973-79, whereas growth slowed down for the other five countries.

Services

Table A.4 shows that output growth in services for the period as a whole was not very different from that in the industrial sector in Denmark, France, Sweden and the UK. In Italy, the Netherlands and Spain services output grew slower than industrial output. Only in Germany and the USA services output grew faster. However, in all countries the growth of employment in services has been much faster than in industry, in particular for the period since 1973.

Employment growth in community and government services (table A.6) was somewhat faster than in producer and distributive services (table A.5) in Denmark, the Netherlands, Sweden and the USA. With the exception of Spain, productivity growth was much slower in community and government services than in producer and distributive services.

The estimation of real output in community and government services is clearly one of the weaker areas in national accounts. The estimates suggest that none of the countries consistently applied a zero productivity growth assumption for the sector as a whole. Estimation procedures of output in this area strongly differ across countries. Some countries (for example, Germany) even assume a constant productivity growth rate for some industries within this sector. Other countries (Italy, the Netherlands, Sweden and the USA) suggest a decline in productivity in community and government services after 1973.

Structural Change

It is clear from these tables that the dynamics in sectoral growth rates show a great variety. One may therefore expect that the effect of structural change has played a role in explaining differences in the overall growth performance of those countries. A minimum condition for a positive effect of structural change on growth is that there has been a net shift of resources out of sectors with relatively low productivity levels to those with high productivity levels. To examine this, we need to analyse two additional sets of information which can be derived from the database in this paper, i.e. the disparity in productivity levels between the sectors, and the change in employment shares from low productivity to high productivity sectors.

Table A.8 shows the level of productivity for each sector compared to the productivity level of the economy as a whole. These levels are calculated by dividing the share of gross value added in current prices for each sector by the corresponding employment. It appears that the level of productivity in agriculture is lower than productivity for the economy as a whole, with the exception of the Netherlands (1950 to 1973) and the USA (1973 and 1979). Agricultural productivity was also relatively high in the UK, but it was relatively low in Germany, Italy and Spain.

During the early post-war period productivity levels in manufacturing were relatively high compared to the average for the economy as a whole, which is of course to some extent related to the lower productivity level and larger share of the agricultural sector in the economy. After 1973 the manufacturing productivity level was mostly close to that of the total economy.

With the exception of Italy (in 1950 and 1960) and Spain (1973 and 1979) the average productivity level in community and government services was relatively low, whereas for producer and distributive services it was significantly higher than the total economy level. In fact, productivity levels in the latter group of services were mostly well above those in manufacturing.

One can conclude from table A.8 that any shift of resources from agriculture to manufacturing and from manufacturing to producer and distributive services would increase the contribution of structural change to growth, whereas a shift to community and government services would reduce this contribution.

Table A.9 shows the changes in employment shares of the individual sectors. In 1950, four of the nine countries (Denmark, France, Germany and Sweden) had an agricultural employment share of around 25 per cent. The Netherlands (13 per cent), the UK (6 per cent) and the USA (11 per cent) had clearly lower employment shares, whereas Italy and Spain still employed 45 per

cent of their labour force in agriculture. All countries experienced a strong decline in agricultural employment during the post-war period, in particular during the period 1950 to 1973.

There has been some increase in employment shares in industry and manufacturing between 1950 and 1973, but on the whole the rise was not big except for Italy and Spain. Manufacturing employment shares were relatively high during the early post-war period in Germany and the UK.⁸ The UK experienced a rapid decline in its manufacturing employment share during the 1980s.

In 1990, the services sector accounted for about two-thirds of total employment in all eight European countries and even for three-quarters of employment in the USA. In Denmark, Germany, France, Spain, Sweden and the USA, community and government services accounted for a larger share in employment than producer and distributive services, whereas the opposite was the case for the UK and the Netherlands.

The effect of shifts in sectoral shares on the productivity growth for the economy as a whole can be calculated according to a variety of different techniques. In all cases it is crucial to take account not only of the shift of employment from sectors with low productivity *growth* to sectors with high productivity *growth*, but also from sectors with low productivity *levels* to those with high productivity *levels*. The latter needs to be taken into account, because in theory it is possible that the shift of employment towards high growth-sectors may be offset by a lower productivity level of the high growth-sector compared to the slow growth-sector.

To measure the effect of the contribution of employment shifts on the overall productivity growth, one may express the productivity for the economy as a whole as the productivity *level* by sector weighted by the sectoral employment shares:

$$P_m = \frac{Y_m}{L_m} = \sum_{k=1}^n \left(\frac{Y_k}{L_k} \right) \left(\frac{L_k}{L_m} \right) = \sum_{k=1}^n (P_k S_k) \quad (1)$$

with Y and L representing output and employment by sector ($k=1..n$) and the total economy (m), P representing productivity (Y/L) and S representing the sectoral employment share (L_k/L_m).

In a time perspective this expression can be rewritten as

$$\Delta P_m = \sum_{k=1}^n (\Delta P_k * S_k) + \sum_{k=1}^n (P_k * \Delta S_k) \quad (2)$$

⁸ It should be emphasized that the German estimate for manufacturing may be somewhat overstated because repair and maintenance is included with manufacturing. On the other hand, the publishing sector in Germany is included with services.

In a discrete form the latter can be rewritten into three components as:⁹

$$\frac{P_m^t - P_m^0}{P_m^0} = \frac{\sum_{k=1}^n (P_k^t - P_k^0) * S_k^0}{\sum_{k=1}^n P_k^0} + \frac{\sum_{k=1}^n P_k^0 * (S_k^t - S_k^0)}{\sum_{k=1}^n P_k^0} + \frac{\sum_{k=1}^n (P_k^t - P_k^0) * (S_k^t - S_k^0)}{\sum_{k=1}^n P_k^0} \quad (3)$$

for a current year (t) and a base year (0).

The first term on the right-hand side of the latter expression represents the intrasectoral productivity growth, i.e. it that part of the overall productivity change which is caused by productivity growth within the sectors. The second term is called the net shift effect, and measures the effect of the change in sectoral employment shares on overall growth. The third term is derived as a residual and represents the joint effect of changes in employment shares and sectoral productivity, called the interaction effect. The latter effect is usually small as in most cases sectors with rapid productivity growth (i.e. agriculture and industry) show an offsetting decline in employment shares.

Table 1 distinguishes the three components described above for the periods 1950-1973 and 1973-1990, which together add up to the overall growth rate. Some authors (including Maddison (1996), who uses a three-sector instead of a ten-sector disaggregation) interpret the net-shift effect and the interaction effect together as representing the structural effect. However, it is useful to distinguish between these two effects, as only the former represents the pure effect of shifts from low productivity to high productivity sectors, even though the interaction effect includes a "structural change" element as well (see below).¹⁰

For all countries and both sub-periods by far the largest part of the overall productivity increase is explained by the rise in intrasectoral productivity. On the whole the effect of structural change, represented by the second term of the expression, on the overall growth of labour productivity appears fairly small but it always has a positive sign. During the period 1950-73 the net shift effect was biggest in Denmark, Germany, Italy, Spain and Sweden. However, for Denmark and Sweden (and also the Netherlands and the UK) there were relatively large

⁹ See also, for example, Fabricant (1942), Maddison (1952) and Badulescu (1993).

¹⁰ The three effects were measured at two levels of disaggregation. Firstly I used the ten-sector breakdown which is also represented in table 1. In addition I calculated the effect for a more aggregated breakdown of the three broad sectors, i.e. agriculture, industry and services. On the whole the differences between the different aggregation levels were fairly small for the period 1950-73, which suggests that the shift among the three broad sectors dominated any other shifts at more disaggregated levels. For the period 1973-90 the three-sector disaggregation systematically tended to give a somewhat bigger weight to the intrasectoral effect, whereas the ten-sector disaggregation leaves more of the explanation to structural change.

negative interaction effects which offset the net-shift effect. In contrast, for Italy and Spain, and to a lesser extent Germany, there was an additional positive interaction effect which mainly reflects the relation between the rise in sectoral productivity in industry and the increase in the industrial employment shares. The net shift effect in the USA, which had the lowest overall productivity growth, was smallest.

Table 1
Intra-Sectoral Effect, Net-Shift Effect and Interactive Term on Growth Rates
of Labour Productivity, 1950-73 and 1973-90

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>1950-1973</i>									
(1)	3.45	4.35	4.84	5.31	3.83	5.37	2.99	2.08	1.91
of which:									
(2)	3.08	3.94	3.93	3.87	4.39	4.16	2.64	2.02	2.09
(3)	0.56	0.33	0.62	0.99	0.37	0.68	0.54	0.46	0.11
(4)	-0.19	0.08	0.29	0.45	-0.94	0.53	-0.22	-0.40	-0.29
<i>1973-1990</i>									
(1)	1.72	2.31	1.98	1.97	0.97	3.64	1.27	1.34	0.48
of which:									
(2)	1.44	1.99	1.71	1.44	0.99	3.14	1.32	1.52	0.68
(3)	0.46	0.59	0.28	0.89	0.32	0.72	0.14	0.39	0.08
(4)	-0.19	-0.27	0.00	-0.36	-0.34	-0.22	-0.19	-0.57	-0.28
<i>1973-1990 minus 1950-1973</i>									
(1)	-1.73	-2.05	-2.85	-3.34	-2.85	-1.73	-1.73	-0.74	-1.42
of which:									
(2)	-1.63	-1.95	-2.22	-2.43	-3.40	-1.02	-1.32	-0.50	-1.41
(3)	-0.10	0.26	-0.34	-0.10	-0.06	0.04	-0.44	-0.07	-0.03
(4)	0.01	-0.36	-0.29	-0.81	0.60	-0.75	0.03	-0.17	0.02

(1) = annual compound growth rate of labour productivity

(2) = intrasectoral effect

(3) = net-shift effect

(4) = interaction effect

^a Estimates for 1950 refer to 1951

Note: the effects were measured using productivity level estimates expressed in 1973 prices for the period 1950-1973 and productivity in 1990 prices for the period 1973-1990.

During the period 1973-90 productivity growth slowed down everywhere, but there has not been a substantial change in the distribution between the intrasectoral effect on the one hand and the other two effects on the other hand. Again Spain and Italy showed the biggest net shift effect, although the interaction effect was now more in line with that of the other countries. In fact the interaction effect was negative for all countries during this period. The latter indicates that employment shares declined exceptionally rapidly in sectors with relatively rapid productivity growth (i.e. agriculture and manufacturing) whereas the productivity rises were much more moderate in those sectors with rising employment shares (i.e. services).

The bottom part of table 1 shows the disaggregation of the slowdown in growth between 1950-1973 and 1973-1990. In all cases the biggest part of the slowdown was due to the fall in intrasectoral productivity growth. Only in the case of Germany there was a significant slowdown in the net shift effect, and in Italy and Spain the interaction effect accounted for a fair share in the productivity slowdown.

Despite the relatively small explanatory power of structural change on the basis of the conventional shift-share analysis applied here, one cannot definitively conclude that structural change has therefore played a minor role in economic growth. Firstly, it is important to look not only at differences in average productivity growth and levels by sector, but also at differences in marginal productivity performance. For example, the productivity performance of the agricultural sector might well have been much worse in case the most inefficient farms had not disappeared in the process of structural change.¹¹

Secondly as mentioned at the beginning of this paper, structural transformation is about more than only the shift from low to high productivity sectors. It also includes changes in patterns of demand, trade and the use of production factors.

However, the major conclusions to be derived from this conventional analysis is that productivity growth within sectors has been the driving force behind growth in post-war Europe, and that the decline of growth since 1973 is mainly accounted for by the productivity slowdown within each of the sectors of the economy.

¹¹ See Denison (1967) for a discussion of the effect on growth of the reduction of excessive allocation of labour to the agricultural sector during the 1950s. Denison estimated the effect of shift of labour out of agriculture on the productivity performance of agriculture itself, and concluded it accounted for 12 per cent of the growth of national income per person employed in Northwest Europe from 1950 to 1962.

4. Capital Intensity and Joint Factor Productivity

An important element of any growth accounting study is the extent to which output per worker is accounted for by the rising intensity of factor inputs other than labour, among which the physical capital stock. From its early times onwards the growth accounting literature has included estimates of capital stock or approximations for the stock, such as investment-output ratios.

Unfortunately, capital stock estimates could not usually be derived directly from the national accounts, but instead had to be calculated on the basis of the perpetual inventory method (PIM). The latter method is based on the accumulation of investment, mostly obtained from national accounts, which is subsequently depreciated and scrapped on the basis of assumptions concerning the life time of assets and the pattern of depreciation and scrapping.¹²

Maddison (1993, 1996) and O'Mahony (1993) provide PIM estimates of the non-residential capital stock based on assumptions concerning asset lives and scrapping patterns which are standardized across the countries for the total economy and the sectors respectively. For the present paper, the sectoral capital stock estimates from O'Mahony were linked to the sectoral national accounts to obtain estimates of capital intensity and joint factor productivity for four countries, i.e. France, Germany, the UK and the USA.

The bottom two panels of tables A.1 to A.7 show the index of the non-residential capital stock per person employed and joint factor productivity per sector and for the total economy. Joint factor productivity was calculated on the basis of a traditional "Solow-type" production function, in which the weights of labour and capital represent their respective factor share in the value added. They therefore add up to one suggesting constant returns to scale:

$$Y = AL^\alpha K^{1-\alpha} \quad (4)$$

with α as the partial elasticity of output with respect to labour and $1-\alpha$ as the partial elasticity of output with respect to capital.

This can be reformulated by deducting the logarithmic index (which is the growth rate) of the relative capital-labour ratio of year t and year 0 (K^t/L^t over K^0/L^0) from that of the corresponding ratio of labour productivity (Y^t/L^t over Y^0/L^0):

$$\ln \frac{A^t}{A^0} = \ln \frac{Y^t/L^t}{Y^0/L^0} - (1-\alpha) \ln \frac{K^t/L^t}{K^0/L^0} \quad (5)$$

with α representing the unweighted average of the share of labour compensation in gross domestic product in year t and year 0 .

¹² See O'Mahony (1993) which provides details on the perpetual inventory method.

To calculate the labour factor share α , I obtained the total labour compensation for employees for 1975 from the same national account sources as in the previous sections.¹³ Labour compensation included total gross wages and salaries, and employer contributions to social security and other insurance schemes. However, these figures do not include the compensation for self-employed persons, which is part of the operating surplus in the national accounts. For this reason, I imputed the labour compensation for self-employed persons on the assumption that the compensation per employee equalled that of a self-employed person.

Table 2 shows the labour factor shares for the four countries for 1975, which suggest a fairly similar picture across the countries for the total economy, but substantial differences across the sectors. Labour factor shares in agriculture were much higher in France and Germany than in the UK and the USA, representing the more capital-intensive nature of the agricultural sector in the latter two countries. On the other hand, the share of labour in value added in services (and in particular in personal and government services) appears to be of greater importance in the UK and the USA than in France and Germany. There is also a relatively larger share of manufacturing labour compensation in value added in Germany and the UK compared to France and the USA.

Table 2
The Share of Labour Compensation in Total Value Added by Sector
of the Economy in 1975, in percentages

	France	Germany	United Kingdom	United States
Agriculture	74	75 ^a	58	34
Industry	71	85	80	82
of which:				
Manufacturing	70	86	83	76
Services	64	63	73	72
of which:				
Producer and Distributive Services	55	53	61	57
Personal and Government Services	78	75	92	90
Total Economy	70	70	76	72

^a The share for agriculture was assumed to be 75, because the imputation for self-employed led to an estimate of more than 100.

Sources: See sources appendix tables.

¹³ It might have been better to use annual chain weights instead of one constant weight for the whole period, which would have made equation (5) a genuine translog index. However, there was insufficient information for many of the sectors to calculate annual weights. The year 1975 was chosen as a year close to the middle of the period under consideration and to provide a better link with the comparative level estimates in section 5 which are also benchmarked on 1975.

Table A.1 shows a faster growth of capital intensity in French and German agriculture than in the UK and the USA, though the former countries undoubtedly started from a lower level of capital intensity. Nevertheless, the joint factor productivity performance of particularly Germany is still better than in the UK and the USA.

The same as for agriculture can be said of the growth in capital intensity and joint factor productivity in manufacturing (table A.3). However, the performance in UK manufacturing has improved dramatically during the 1980s, both in comparison to earlier sub-periods as well as in comparison to the other countries in the table.

The picture for the services sector is slightly different. Capital intensity clearly grew slower in the USA than in the European countries, whereas the US joint factor productivity performance in services is not better than in the other countries. As mentioned above, the USA experienced a relatively rapid growth in services employment. The rise in capital intensity in the UK was much higher than in France and Germany, whereas joint factor productivity in the UK grew more slowly than that of the two continental European countries.

It is clear from tables A.1 to A.7 that the rise in capital intensity was strongly related to the increase in joint factor productivity. Both factors played a crucial role in the post-war growth performance. This is one of the stylized facts which has received a great deal of attention in the growth accounting literature.¹⁴

Recently it has been suggested that the relationship between capital intensity and total factor productivity has not been as strong since 1973 than it was during the 1950-1973 period, because the contribution of total factor productivity to the catch-up in productivity of follower countries compared to the USA has slowed down in comparison to the contribution of capital intensity.¹⁵ Although this argument has been mainly put in terms of comparing growth and levels of capital intensity and joint factor productivity for each country relative to the USA, it is not unlikely that this hypothesis also had its repercussions on the national growth rates as such those presented here.

It is not immediately apparent from the data presented in tables A.1 to A.7 that the slowdown in joint factor productivity after 1973 compared to the earlier period has been significantly bigger than for capital intensity. However, to assess the issue more fully it would be desirable to test the full annual data set for both variables and to compare the relative growth rates and levels of capital intensity and joint factor productivity, which has not been done within the framework of this paper.

¹⁴ For a specific account of the relation between capital intensity and total factor productivity growth, see Wolff (1991).

¹⁵ See, for example, Dollar and Wolff (1993) and Englander and Gurney (1994).

5. Productivity Levels and the Effects of Structural Change

The study of structural change and economic performance can greatly benefit from international comparisons of *levels* of output and productivity by sector, in particular when such estimates take account of differences in relative price levels between countries. Unfortunately, sectoral level estimates are not available on a standardized basis in the national accounts.

International organizations such as EUROSTAT, OECD and the United Nations provide regular estimates of purchasing power parities from the expenditure side, which can be used to convert total GDP to a common currency. However, expenditure PPPs cannot be used for comparisons across countries of GDP by industry of origin. Expenditure PPPs include prices of imported goods, but exclude those of items which are produced and exported. Secondly, the expenditure PPPs take account of differences in trade and transport margins and indirect taxes between countries. Thirdly, there are no expenditure PPPs for many intermediate products, such as, for example, fertilizers, iron and steel, cement or paper pulp.

Exchange rates are not a good alternative to PPPs, as they do not necessarily represent the actual price relationship between two countries for each product or industry. In particular during recent decades exchange rates have been subject to substantial short-term fluctuations and capital movements.

For our purpose, one therefore needs to estimate specific purchasing power parities based on output prices by industry of origin. In the past decade a range of industry of origin studies were carried out within the framework of the International Comparisons of Output and Productivity (ICOP) project at Groningen University.¹⁶ So far the ICOP comparisons have essentially been bilateral, with mostly the USA, which has been the world productivity leader throughout the post-war period, as the "numeraire" country.

¹⁶ There are some important pioneering studies of this type for earlier years, in particular between the UK and the USA (Rostas, 1948; Paige and Bombach, 1959; Smith et al., 1982). For an historical overview of industry of origin studies, see van Ark (1993), table 2.2. For a general overview of the ICOP project, see Maddison and van Ark (1994). Most ICOP studies are available for the manufacturing sector covering approximately twenty countries, including six of the countries covered in this paper, i.e. France, Germany, the Netherlands, Spain, the UK and the USA. For a specific account of ICOP studies on manufacturing, see van Ark (1993). There are also studies for agriculture (Maddison and Van Ooststroom, 1993) and mining (Wieringa and Maddison, 1985) covering thirteen countries. So far the comparisons for other sectors of the economy cover a more limited number of countries. For example, there is a study of output and productivity in France and the USA for transport and communication and for wholesale and retail distribution (Mulder, 1994).

Methods and Sources

It needs to be emphasized that the estimates in the ICOP studies are usually not directly derived from national accounts information for the various countries. Instead they are mostly based on primary sources on value added and employment, which are more detailed and disaggregated. Such primary sources also have the advantage that output and employment is derived from one and the same survey and therefore give a better guarantee that the same activities are covered for both variables, which is of crucial importance for level comparisons.

In the case of agriculture and mining, total output is estimated in terms of US dollars by valuing each individual item on the basis of producer prices provided by international statistics, such as those of the Food and Agriculture Organization (FAO) and the United Nations. Intermediate inputs, also valued at US prices, are deducted to arrive at value added.

For manufacturing, ICOP comparisons are based on production censuses or industrial surveys. Production censuses also provide figures on quantities sold and sales values for individual products to calculate the "industry PPPs" (otherwise called "unit value ratios"). These UVRs are used to convert value added to the same currency. The census concept of value added is defined as gross value of output minus cost of raw materials, packaging, energy inputs and contract work. This concept of value added is not exclusive of the value of purchased industrial and non-industrial services, such as repair and maintenance, advertising, accountancy, etc., and is therefore somewhat broader than in the national accounts. In ICOP comparisons with the USA as the numéraire country it appeared not possible to obtain the national accounts concept of value added directly from the *US Census of Manufactures* (see van Ark, 1993).

A recent ICOP study by Maddison and van Ark (1994) has adjusted ICOP estimates for four commodity sectors (i.e. agriculture, forestry and fishing, mining and manufacturing) to a "national accounts basis". These adjustments implied that:

- 1) the estimates of purchasing power parities, value added and employment were rebased to a single benchmark year, i.e. 1975.
- 2) value added was adjusted to the so-called "present national accounts concept", i.e. gross value added at factor cost including bank service charges.
- 3) value added and employment were "blown up" to achieve full coverage, i.e. to include smaller establishments with less than ten or less than twenty employees.

The estimates from the Maddison-van Ark paper were taken as the starting point here, but in addition the PPPs were adjusted from a Paasche basis to a Fisher basis. The latter PPP is the geometric average of the Laspeyres and the Paasche PPPs, and is not biased towards either the denominator country or the numerator country.

Table 3 shows the Fisher PPPs for two commodity sectors (i.e. agriculture, including forestry and fishing, and manufacturing) in terms of national currencies to the US dollar for France, Germany, the Netherlands and the UK for 1975.¹⁷ Column (4) shows the expenditure Fisher PPPs which were obtained from Kravis, Heston and Summers (1982). These PPPs were used to calculate the value added in US dollars for agriculture, manufacturing and the economy as a whole, which is shown in table 4. The value added in US dollars for the rest of the economy is then derived as a residual by subtracting the value added in agriculture and manufacturing from the PPP-converted GDP for the economy as a whole. By comparing the value added for the residual part of the economy expressed in US dollars to that expressed in the currencies of the countries themselves, the PPPs for the residual sector of the economy are implicitly obtained (see column (5) of table 3).

Table 3 shows that the PPPs are quite different across the sectors in 1975. The PPPs for manufacturing are relatively close to the official exchange rate in 1975, which might have been expected because of the largely tradeable nature of most manufacturing products. The PPPs for agriculture were clearly higher than the manufacturing PPPs, which indicates the relatively high price level of agricultural products in European countries compared to the USA. The average of the PPPs for the two commodity sectors are somewhat below the GDP PPPs for France and the Netherlands, 16 per cent below the GDP PPP for Germany, but 22 per cent above the GDP PPP in the case of the UK. As a result, price levels in services relative to the commodity sectors were low in the UK and high in Germany in 1975.

Table 4 shows the value added for each of the countries converted to US dollars as well as the corresponding employment and labour productivity in 1975.¹⁸ In table 5 the 1975 benchmark estimates of labour productivity are extrapolated backwards to 1950 and forwards to 1990. In agriculture, the Netherlands emerged as the best performer after the USA during the post-war period. By 1990 it had a productivity level which was 1.3 to 1.4 times that in France and the UK and 2.4 times that in Germany.

¹⁷ Mining is excluded because there were no Fisher PPPs available for that sector. Spain is excluded from the comparison, because the binary comparison is only with the UK as the benchmark country (see van Ark, 1995).

¹⁸ The value added and employment estimates from Maddison and van Ark (1994) for the commodity sectors for 1975 were mostly fairly similar to the national accounts estimates. The most important differences are for agriculture in Germany, for which ICOP value added was 33 per cent below national accounts value added and ICOP employment was 10 per cent below national accounts employment; for manufacturing in France, for which ICOP value added was 22 per cent below national accounts value added and ICOP employment 10 per cent below national accounts employment; and for manufacturing in the UK, for which ICOP value added was 13 per cent above national accounts value added and ICOP employment 3 per cent below national accounts employment. Some of these differences may be due to differences in valuation systems as the German and French national accounts are at producer prices rather than at factor cost (see section 2). See also van Ark (1993) for a more detailed discussion.

Table 3
Purchasing Power Parities by Industry of Origin, ICP Expenditure PPPs and the Exchange Rate in 1975 (national currencies to the US dollar), Fisher Type

	Agri- culture	Manu- facturing	Two Commodity Sectors	ICP Fisher PPP for GDP	Rest of the Economy (residual)	Exchange Rate
	(1)	(2)	(3)	(4)	(5)	(6)
France	6.03	4.39	4.57	4.73	4.81	4.29
Germany	3.20	2.39	2.43	2.88	3.25	2.46
Netherlands	3.97	2.64	2.80	2.99	3.06	2.53
UK	0.581	0.466	0.474	0.388	0.359	0.45
USA	1.00	1.00	1.00	1.00	1.00	1.00

Sources: Agriculture and Manufacturing from Maddison and Van Ark (1994), adjusted from Paasche to Fisher PPPs. ICP Paasche PPP from Kravis et al. (1982), pp. 255-82.

Table 4
Gross Value Added at Factor Cost in US Dollars covered at PPPs, Employment and Labour Productivity in 1975

	France	Germany	Nether- lands	United Kingdom	United States
<i>Gross Value Added (mln. US\$)</i>					
Agriculture ^a	12,800	6,391	2,456	4,756	51,386
Manufacturing	70,859	131,760	16,994	67,468	336,063
Total Economy	296,110	341,866	71,636	256,792	1,499,684
Other Sectors (residual)	212,451	203,715	52,186	184,567	1,112,235
<i>Employment</i>					
Agriculture ^a	2,156	1,801	263	687	3,507
Manufacturing	5,085	8,460	1,142	7,467	18,302
Total Economy	21,452	26,110	4,743	25,055	88,026
Other Sectors (residual)	14,211	15,849	3,338	16,901	66,217
<i>Labour Productivity (Gross Value Added per Person)</i>					
Agriculture ^a	5,937	3,549	9,340	6,924	14,652
Manufacturing	13,935	15,574	14,887	9,035	18,362
Total Economy	13,803	13,093	15,104	10,249	17,037
Other Sectors (residual)	14,950	12,854	15,632	10,921	16,797

^a including forestry and fisheries

Sources: Agriculture, Manufacturing and Total Economy from Maddison and van Ark (1994), adjusted from Paasche to Fisher PPPs.

Table 5
Relative Levels of Gross Value Added per Person Employed (USA = 100)

	France	Germany	Netherlands	UK
<i>Agriculture (including Forestry and Fisheries)</i>				
1950	26.0	10.8	33.2	31.9
1960	26.3	13.9	40.0	31.6
1973	41.5	22.7	65.3	48.9
1979	50.2	29.1	74.1	52.1
1990	60.0	34.1	80.4	55.7
<i>Manufacturing</i>				
1950	36.9	39.8	37.9	46.0
1960	50.3	66.3	56.0	48.2
1973	71.1	79.4	81.7	49.4
1979	84.6	91.8	86.8	48.5
1990	80.9	75.9	83.8	53.1
<i>Total Economy</i>				
1950	44.2	38.0	55.0	58.3
1960	54.1	54.2	60.7	55.0
1973	76.3	73.0	84.6	60.7
1979	90.0	86.3	92.3	65.1
1990	103.7	94.0	91.9	70.1
<i>Other sectors of the Economy (Residual)</i>				
1950	56.0	49.1	63.9	64.4
1960	67.1	59.1	66.2	60.3
1973	84.4	73.8	87.9	65.8
1979	96.5	84.5	94.9	72.4
1990	112.1	96.9	93.1	75.8

Source: see table 4 and time series from the appendix.

In manufacturing, Germany reached the highest productivity level of the four countries in 1960, and was less than 10 per cent behind the US productivity level in 1979. After 1979 the German productivity advantage eroded rapidly. The Netherlands reached the highest productivity levels among the four European countries by 1990. During the 1980s only the UK managed to keep its comparative productivity level in manufacturing up relative to the USA, but it was still way behind the continental European countries in 1990.¹⁹

In the residual sector of the economy, which represented all sectors other than agriculture and manufacturing, the continental European countries had reached productivity levels close to those of the USA by 1979. In 1990, France even showed a productivity advantage of 12 per cent over the USA on the basis of these measures. The UK stayed behind in productivity performance, although its performance was better than in the commodity sectors of the economy.²⁰

To measure the degree to which the productivity gaps between each country and the productivity leader can be accounted for by differences in the structure of sectoral employment, a measure analogous to that for the shift effect in section 3 can be calculated by substituting country variables by time variables from equation (3):

$$\frac{P_m^X - P_m^U}{P_m^U} = \frac{\sum_{k=1}^n (P_k^X - P_k^U) * S_k^U}{\sum_{k=1}^n P_k^U} + \frac{\sum_{k=1}^n P_k^U * (S_k^X - S_k^U)}{\sum_{k=1}^n P_k^U} + \frac{\sum_{k=1}^n (P_k^X - P_k^U) * (S_k^X - S_k^U)}{\sum_{k=1}^n P_k^U} \quad (6)$$

for a country X and a country U (in this case the USA).

The results are shown in table 6. It appears that structural effects hardly played a role in accounting for the productivity gaps between the Netherlands and the UK on the one hand and the USA on the other. They were somewhat more important for France and Germany in 1950 and 1960, but the effect became negligible in later years. In Germany, the sectoral employment distribution even turned in favour of that country, which can be explained by the relatively high employment share in manufacturing. On the other hand, in particular for 1990, there were fairly strong offsetting effects from the interaction effect.

¹⁹ The estimates of relative productivity levels in manufacturing presented here are very similar to those based on census value added from van Ark (1993).

²⁰ Here I show no estimates of comparative levels of joint factor productivity, which in principle can be done using the same method as for the growth estimates in section 4. See O'Mahony (1993) for estimates of that kind for the total economy and for manufacturing.

Table 6
Effect of Differences in Sectoral Distribution
of Employment on Comparative Productivity Levels

	France	Germany	Netherlands	UK
<i>Value added per Person (US = 100) on Basis of Intrasectoral Productivity Gaps</i>				
1950	50.3	45.4	57.3	58.3
1960	61.9	58.4	62.9	56.5
1973	80.0	72.8	85.0	61.5
1979	92.5	84.0	92.6	66.2
1990	103.7	90.8	90.3	69.7
<i>Effect of Employment Structure on Productivity Gap (US = 100) in Percentage Points</i>				
1950	-6.8	-8.1	-1.9	0.9
1960	-5.4	-4.9	-1.9	-1.2
1973	-0.6	1.1	0.2	1.2
1979	0.4	2.6	0.1	1.8
1990	4.0	8.8	2.5	2.6
<i>Interaction Effect on Productivity Gap (US = 100) in Percentage Points</i>				
1950	0.8	0.7	-0.4	-0.9
1960	-2.4	0.6	-0.3	-0.3
1973	-3.0	-0.9	-0.6	-2.1
1979	-2.9	-0.2	-0.5	-2.9
1990	-4.0	-5.6	-0.9	-2.2
<i>Value added per Person using Own Country Employment Weights</i>				
1950	44.2	38.0	55.0	58.3
1960	54.1	54.2	60.7	55.0
1973	76.3	73.0	84.6	60.7
1979	90.0	86.3	92.3	65.1
1990	103.7	94.0	91.9	70.1

Source: see table 5. Employment weights calculated from table 3 and time series on employment from the appendix.

There is much scope for improvement of comparative estimates of output and productivity, for example by expanding these comparisons to services sectors so that in the future the structural effects of differences in employment distribution between producer and distributive services on the one hand and community and government services on the other can be calculated as well. Furthermore it is important to adjust the labour productivity measures for differences in working hours, which up to present is only feasible for manufacturing and the whole economy on a cross-country basis.

6. Summary and the Future Research Agenda on Sectoral Growth Accounting

In this paper, a set of sectoral accounts were presented for eight European countries and the USA for the post-war period. The accounts can be used complementarily to the macroeconomic accounts, such as those presented by Maddison (1995, 1996). Use has also been made of estimates of capital stock by sector (O'Mahony, 1993) to obtain joint factor productivity estimates. In section 5 of the paper the sectoral accounts were linked to the comparative estimates of output and productivity levels from the ICOP project.

The data from the sectoral accounts were analysed for the extent to which structural change, in terms of its narrow definition (i.e. shifts in employment from low productivity to high productivity sectors), has contributed to each country's productivity performance. On the whole the net shift effect was found to have a relatively small but positive impact on the overall productivity growth between 1950 and 1973 and between 1973 and 1990. Furthermore, the decline in growth after 1973 could hardly be explained by a slowdown in net shift effect although fairly strong negative interaction effects set in during the latter period. Similar results were found for the comparisons of the productivity levels.

On the basis of these estimates one may conclude that intrasectoral change in productivity has been the major explanation for productivity growth at the aggregate level in post-war Europe. However, another question is what the intrasectoral productivity growth would have been in case there had been no significant shift in employment shares. This counterfactual question needs to be addressed in more detail, because differences in marginal productivity between the sectors may have been bigger than the differences in average sectoral productivity. Furthermore, as mentioned in the introduction, structural change in terms of its broader definition, including changes in trade and demand patterns and in the use of factor resources, may be more strongly associated with growth and differences in economic performance between countries.

As far as the use of factor resources are concerned, this paper also looked into the contribution of physical capital intensity and joint factor productivity to the change in labour productivity. It was concluded that there was a fairly diverse performance of these two factors across the countries at sectoral level. However, on the whole the rise in physical capital intensity and joint factor productivity developed in parallel during most of the period. The sectoral accounts developed in this paper, in combination with O'Mahony's capital stock estimates, provide a good starting point to test recent suggestions about the greater slowdown in joint factor productivity compared to capital intensity since 1973.

Table A.1
Agricultural Gross Domestic Product at Factor Cost, Employment, Labour Productivity, Capital Intensity and Joint Factor Productivity, 1950-1990 (1950 = 100)

	Denmark	France	Germany	Italy ^a	Nether-lands	Spain	Sweden	United Kingdom	United States
<i>Agricultural GDP in constant prices</i>									
1950	100	100	100	100	100	100	100	100	100
1960	122	130	141	125	142	133	101	126	106
1973	130	166	182	167	208	179	111	179	109
1979	156	177	181	178	257	196	100	184	117
1990	232	216	231	191	442	228	129	258	173
<i>Employment</i>									
1950	100	100	100	100	100	100	100	100	100
1960	82	86	73	76	79	91	71	86	71
1973	44	48	40	38	49	62	35	54	50
1979	39	40	29	34	50	46	31	49	51
1990	27	26	20	25	51	28	22	42	49
<i>Agricultural GDP per Person Employed</i>									
1950	100	100	100	100	100	100	100	100	100
1960	149	151	192	165	179	145	142	147	149
1973	297	346	456	439	426	287	313	331	217
1979	403	447	626	526	518	425	326	378	232
1990	855	822	1,130	769	864	806	594	621	356
<i>Non-Residential Capital Stock per Person Employed</i>									
1950		100	100					100	100
1960		189	211					165	181
1973		600	658					393	359
1979		864	965					496	464
1989		1,400	1,359					561	416
<i>Agricultural GDP per Joint Unit of Labour and Capital</i>									
1950		100	100					100	100
1960		128	160					119	101
1973		218	285					185	94
1979		257	355					191	85
1989		393	545					290	128

^a estimates for 1950 refer to 1951.

Source: For GDP, see appendix tables 1.1 to 1.9. For employment, see appendix tables 2.1 to 2.9. For capital stock, see O'Mahony (1993).

Table A.2
Industrial Gross Domestic Product at Factor Cost, Employment and Labour Productivity,
Capital Intensity and Joint Factor Productivity, 1950-1990 (1950 = 100)

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>Industrial GDP in constant prices</i>									
1950	100	100	100	100	100	100	100	100	100
1960	146	165	255	210	176	190	141	132	141
1973	286	370	449	444	417	750	280	185	226
1979	292	423	488	538	425	1,028	292	195	240
1990	364	479	540	683	463	1,424	363	220	290
<i>Employment</i>									
1950	100	100	100	100	100	100	100	100	100
1960	116	103	140	129	118	137	116	109	107
1973	125	120	143	145	119	204	115	101	130
1979	111	111	130	147	110	195	108	94	142
1990	109	94	127	132	100	176	105	75	137
<i>Industrial GDP per Person Employed</i>									
1950	100	100	100	100	100	100	100	100	100
1960	126	161	182	163	149	138	122	121	132
1973	228	309	313	307	350	367	243	183	173
1979	262	380	376	365	386	527	270	207	170
1990	332	512	426	519	461	807	347	292	212
<i>Non-Residential Capital Stock per Person Employed</i>									
1950		100	100					100	100
1960		108	173					142	143
1973		167	398					279	191
1979		220	514					346	218
1989		325	622					448	269
<i>Industrial GDP per Joint Unit of Labour and Capital</i>									
1950		100	100					100	100
1960		157	167					113	119
1973		266	253					149	144
1979		302	292					162	136
1989		359	316					218	158

^a estimates for 1950 refer to 1951.

Source: see table A.1.

Table A.3
Manufacturing Gross Domestic Product at Factor Cost, Employment and Labour
Productivity, Capital Intensity and Joint Factor Productivity, 1950-1990 (1950 = 100)

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>Manufacturing GDP in constant prices</i>									
1950	100	100	100	100	100	100	100	100	100
1960	141	168	289	186	209	192	146	139	131
1973	271	423	549	490	467	829	301	205	241
1979	298	496	607	701	468	1,180	311	196	268
1990	345	544	687	960	597	1,567	379	220	339
<i>Employment</i>									
1950	100	100	100	100	100	100	100	100	100
1960	117	103	144	119	117	134	114	111	109
1973	120	119	149	140	117	199	112	103	130
1979	106	111	135	150	105	194	108	96	138
1990	109	92	134	130	100	168	102	71	126
<i>Manufacturing GDP per Person Employed</i>									
1950	100	100	100	100	100	100	100	100	100
1960	121	164	200	156	178	143	128	126	120
1973	226	356	368	350	398	416	270	198	185
1979	282	447	449	467	446	609	289	205	195
1990	315	590	512	738	595	935	370	310	269
<i>Non-Residential Capital Stock per Person Employed</i>									
1950		100	100					100	100
1960		152	159					130	131
1973		363	373					244	179
1979		497	477					299	216
1989		745	558					403	285
<i>Manufacturing GDP per Joint Unit of Labour and Capital</i>									
1950		100	100					100	100
1960		145	188					121	113
1973		242	308					170	161
1979		277	363					171	162
1989		320	395					245	208

^a estimates for 1950 refer to 1951.

Source: see table A.1.

Table A.4
Services Gross Domestic Product at Factor Cost, Employment and Labour Productivity,
Capital Intensity and Joint Factor Productivity, 1950-1990 (1950 = 100)

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>Services GDP in constant prices</i>									
1950	100	100	100	100	100	100	100	100	100
1960	143	146	203	151	143	170	141	119	144
1973	273	271	359	293	252	387	231	169	244
1979	324	332	443	369	320	480	272	188	296
1990	404	458	624	495	409	676	354	256	406
<i>Employment</i>									
1950	100	100	100	100	100	100	100	100	100
1960	116	105	146	129	117	112	130	108	126
1973	164	135	180	164	153	168	173	124	178
1979	185	150	199	192	179	177	202	134	213
1990	207	179	237	250	224	223	240	170	280
<i>Services GDP per Person Employed</i>									
1950	100	100	100	100	100	100	100	100	100
1960	123	140	139	117	122	152	109	110	114
1973	166	200	199	179	165	231	133	137	137
1979	175	222	223	192	179	272	134	140	139
1990	195	256	263	198	183	303	148	151	145
<i>Non-Residential Capital Stock per Person Employed</i>									
1950		100	100					100	100
1960		119	102					130	103
1973		185	194					258	121
1979		236	234					311	125
1989		310	293					419	135
<i>Services GDP per Joint Unit of Labour and Capital</i>									
1950		100	100					100	100
1960		134	138					103	113
1973		163	158					107	127
1979		166	166					105	129
1989		172	177					109	131

^a estimates for 1950 refer to 1951.

Source: see table A.1.

Table A.5
Gross Domestic Product in Producer and Distributive Services at Factor Cost,
Employment and Labour Productivity, Capital Intensity and Joint Factor Productivity,
1950-1990 (1950 = 100)

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>GDP in Producer and Distributive Services at constant prices</i>									
1950	100	100	100	100	100	100	100	100	100
1960	152	157	225	171	163	167	148	127	145
1973	315	346	422	383	290	407	253	189	259
1979	360	425	524	485	392	498	290	207	323
1990	465	604	720	655	546	666	407	308	447
<i>Employment</i>									
1950	100	100	100	100	100	100	100	100	100
1960	111	106	157	139	124	130	137	113	116
1973	135	141	172	170	150	240	161	127	156
1979	136	155	175	197	171	246	171	134	188
1990	147	181	189	241	215	273	203	168	237
<i>GDP in Producer and Distributive Services per Person Employed</i>									
1950	100	100	100	100	100	100	100	100	100
1960	137	149	143	123	131	128	108	113	125
1973	234	245	245	225	194	170	158	149	166
1979	265	275	300	246	230	202	40	155	172
1990	315	334	380	272	254	244	200	184	189
<i>Non-Residential Capital Stock per Person Employed</i>									
1950		100	100					100	100
1960		111	101					136	106
1973		146	194					260	131
1979		189	238					327	138
1989		239	302					452	174
<i>GDP in Producer and Distributive Services per Joint Unit of Labour and Capital</i>									
1950		100	100					100	100
1960		142	143					100	122
1973		207	179					102	148
1979		206	199					98	150
1989		226	219					104	150

^a estimates for 1950 refer to 1951.

Source: see table A.1.

Table A.6
Gross Domestic Product in Personal and Social Services at Factor Cost, Employment
and Labour Productivity, Capital Intensity and Joint Factor Productivity,
1950-1990 (1950 = 100)

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>GDP in Personal and Social Services at constant prices</i>									
1950	100	100	100	100	100	100	100	100	100
1960	133	136	187	133	122	175	134	109	142
1973	228	204	312	210	212	356	209	144	226
1979	285	250	384	262	244	453	254	163	265
1990	338	328	553	347	265	690	302	185	359
<i>Employment</i>									
1950	100	100	100	100	100	100	100	100	100
1960	122	104	137	119	108	100	122	103	137
1973	207	130	188	157	157	125	186	121	200
1979	256	145	222	187	188	135	234	134	237
1990	293	178	281	259	234	193	277	172	324
<i>GDP in Personal and Social Services per Person Employed</i>									
1950	100	100	100	100	100	100	100	100	100
1960	109	131	137	111	113	174	110	105	104
1973	110	156	166	134	135	285	112	119	113
1979	112	172	173	140	130	336	109	121	112
1990	115	184	197	134	113	358	109	108	111
<i>Non-Residential Capital Stock per Person Employed</i>									
1950		100	100					100	100
1960		115	103					121	97
1973		206	180					227	106
1979		259	210					251	102
1989		346	254					267	92
<i>GDP in Personal and Social Services per Joint Unit of Labour and Capital</i>									
1950		100	100					100	100
1960		127	136					104	106
1973		133	143					111	109
1979		139	144					112	110
1989		138	152					102	117

^a estimates for 1950 refer to 1951.

Source: see table A.1.

Table A.7
Gross Domestic Product of the Total Economy at Factor Cost, Employment and Labour
Productivity, Capital Intensity and Joint Factor Productivity, 1950-1990
(1950 = 100)

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>Total Economy GDP at constant prices</i>									
1950	100	100	100	100	100	100	100	100	100
1960	142	150	222	163	152	167	138	125	141
1973	262	291	389	318	298	420	235	176	229
1979	298	345	451	391	348	535	262	191	265
1990	375	442	572	509	426	740	337	241	348
<i>Employment</i>									
1950	100	100	100	100	100	100	100	100	100
1960	107	100	126	105	112	108	110	107	114
1973	120	109	131	102	126	126	119	110	149
1979	123	110	129	109	134	119	127	111	172
1990	129	113	138	117	152	121	138	120	208
<i>Total Economy GDP per Person Employed</i>									
1950	100	100	100	100	100	100	100	100	100
1960	133	151	176	156	136	155	125	116	123
1973	218	267	296	312	237	333	197	161	154
1979	242	314	350	359	259	448	207	172	154
1990	291	393	414	435	280	611	244	201	168
<i>Non-Residential Capital Stock per Person Employed</i>									
1950		100	100					100	100
1960		119	137					137	118
1973		207	300					262	147
1979		271	381					315	154
1989		374	480					384	167
<i>Total Economy GDP per Joint Unit of Labour and Capital</i>									
1950		100	100					100	100
1960		143	160					108	118
1973		214	213					127	138
1979		253	256					130	137
1989		284	276					148	145

^a estimates for 1950 refer to 1951.

Source: see table A.1.

Table A.8
Relative Level of Gross Value Added per Person Employed
for Each Industry compared to the Total Economy

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>Agriculture</i>									
1950	73	61	45	44	105	66	49	96	63
1960	64	46	43	39	111	53	51	84	62
1973	72	67	42	48	104	47	59	99	112
1979	65	58	44	47	75	44	63	80	105
1990	78	64	45	38	92	44	76	85	79
<i>Industry</i>									
1950	107	136	115	141	102	121	130	102	112
1960	103	134	111	118	104	134	121	104	122
1973	94	106	103	103	102	113	110	101	116
1979	95	104	103	106	106	115	112	108	123
1990	98	104	101	106	116	110	113	118	127
<i>Manufacturing</i>									
1950	106	155	119	135	107	132	148	103	110
1960	96	147	109	107	108	141	140	103	117
1973	85	112	103	95	97	114	104	96	110
1979	93	108	103	102	90	133	101	96	114
1990	91	109	101	103	105	109	102	112	122
<i>Services</i>									
1950	111	92	120	152	97	137	102	99	100
1960	114	97	107	141	95	130	98	97	93
1973	108	103	106	116	98	119	98	99	92
1979	107	104	103	111	99	110	97	96	91
1990	103	101	103	107	95	105	96	93	93
<i>Producer and Distributive Services</i>									
1950	132	104	160	180	104	229		105	124
1960	136	111	126	165	95	193		100	132
1973	138	132	123	138	105	121	118	118	127
1979	144	131	123	137	106	105	116	116	124
1990	143	134	125	130	116	137	125	119	124
<i>Personal and Social Services</i>									
1950	81	82	83	123	88	82		92	78
1960	85	86	86	112	94	80		94	61
1973	81	75	92	93	90	115	82	76	66
1979	79	79	88	82	90	116	83	72	65
1990	74	72	89	85	71	78	75	63	71

^a 1950 refers to 1951.

Source: see table A.1.

Table A.9
Share of Employment by Sector, 1950-1990
(as a percentage of total employment)

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>Agriculture</i>									
1950	26	24	24	45	13	47	23	6	11
1960	20	21	14	33	9	40	15	5	7
1973	10	11	7	17	5	23	7	3	4
1979	8	9	5	14	5	18	6	3	3
1990	6	6	3	10	5	11	4	2	3
<i>Industry</i>									
1950	32	35	43	26	39	22	38	45	33
1960	35	36	48	32	41	28	39	46	31
1973	34	38	47	38	37	36	36	42	29
1979	29	35	44	36	32	36	32	38	27
1990	27	29	40	30	26	32	29	28	22
<i>Manufacturing</i>									
1950	24	25	32	18	28	16	28	34	25
1960	26	25	37	20	29	20	29	35	24
1973	24	27	37	24	26	25	26	32	22
1979	20	25	34	24	22	25	24	29	20
1990	20	20	31	20	18	22	21	20	15
<i>Services</i>									
1950	42	41	33	28	48	31	39	49	56
1960	45	43	38	35	50	32	46	49	62
1973	57	51	45	46	58	41	57	55	67
1979	63	56	51	50	63	46	62	59	70
1990	67	65	57	61	70	57	68	69	76
<i>Producer and Distributive Services</i>									
1950	24	19	16	14	26	12	20	26	28
1960	26	20	20	19	29	14	24	28	28
1973	27	25	21	24	31	22	26	30	29
1979	27	27	22	26	33	24	26	32	31
1990	28	31	22	30	37	26	29	37	32
<i>Personal and Social Services</i>									
1950	17	22	17	14	21	19	19	23	28
1960	20	23	19	16	21	18	21	22	34
1973	30	26	25	22	27	19	30	25	38
1979	36	29	30	24	30	22	36	27	39
1990	39	35	35	31	33	31	39	33	44

^a 1950 refers to 1951.

Source: see table A.1.

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APPENDIX TO "SECTORAL GROWTH ACCOUNTING AND STRUCTURAL CHANGE"

Gross Value Added in Constant Prices

(FIGURES WITHIN LINED AREAS ARE ESTIMATED AS DESCRIBED IN THE NOTES)

Denmark

Notes:

The estimates are all at factor cost.

Original GDP estimates for 1947-1966 are expressed in "1955 prices", for 1966-1971 in "1970 prices" and for 1971-92 in 1980 prices, although the original base years have changed more frequently.

Sources:

GDP 1947-66 from Danmarks Statistik, "Reviderede tideserier for produktionsvaerdi og bruttofaktorindkomst for perioden 1947-1965", Copenhagen, mimeographed. GDP 1966-90 from Danmarks Statistik, *Nationalregnskabsstatistik 1982, 1987 and 1993*, Copenhagen.

France

Notes:

Before 1962 original series are at market prices, linked to series at producer prices from 1962 onwards.

The classification of activities in the French national accounts (INSEE, *Les Comptes de la Nation*, various issues) differed in some respects from the International Standard Industrial Classification. Most important are the inclusion of mining activities in manufacturing, and the distinction between "market" and "non market" services instead of between "government" and "non-government". OECD adjusted the estimates to their common classification scheme, which I could not do directly on the basis of the French national accounts. I therefore relied on the OECD National Accounts for the whole period.

Sources:

1950-58 (in 1954 prices) from OECD, *Statistics of National Accounts 1950-1961*; 1958-62 (in 1958 prices) from OECD, *National Accounts Statistics 1955-1964*; 1962-71 (in 1970 prices) from OECD, *National Accounts of OECD Countries 1950-78, volume I*; 1971-77 (in 1970 prices) from OECD, *National Accounts, Detailed Tables, Volume II, 1971-83*; 1977-1990 (in 1980 prices) from OECD, *National Accounts, Detailed Tables, Volume II, 1980-92*.

Germany

Notes:

Figures for the whole period are at producer prices.

Original GDP estimates in Germany for 1960-1990 are expressed in "1985 prices" and for 1950-1960 in "1976 prices"; although the original base years were changed more frequently (see Maddison, 1996).

Original series for 1950-59 exclude Saarland and Berlin.

The figures for repair and maintenance are included with manufacturing.

Sources:

1950-59 from Statistisches Bundesamt, *Volkswirtschaftlich Gesamtrechnungen, Lange Reihen, 1950-84*, pp. 72-73; 1960-87 from *Volkswirtschaftliche Gesamtrechnungen, Revidierte Ergebnisse 1950-1990*, Fachserie 18, Reihe S.15, pp. 117-120. GDP 1987-92 from *Volkswirtschaftliche Gesamtrechnungen, Hauptbericht 1993 and 1994*, Fachserie 18.

Italy

Notes:

The estimates for the whole period are at factor cost.

Sources:

Updated series belonging to R. Golinelli and M. Monterastelli, *Un metodo per la ricostruzione de serie storiche compatibili con la nuova contabilità nazionale (1959-1989)*, Nota di lavoro no. 9001, Promoteia, November 1990. The updated series which go up to 1992 and are rebased from 1980 to 1985 prices, were kindly provided by Roberto Golinelli (October 1993). These series are entirely compatible with the Italian national accounts from ISTAT, *Contabilità nazionale 1970-1992*.

Netherlands

Notes:

Government excludes government organisations outside the "government sector", which are included in the industry estimates.

The estimates for the whole period are at factor cost. The 1985 estimate is also at factor cost but unadjusted for the difference in value tax received and value added tax paid.

1950-1963: mining, public utilities and construction were obtained on the basis of the assumption that their productivity movement equalled that of the three sectors taken together. Wholesale and retail trade and finance, insurance and real estate were obtained on the basis of the assumption that their productivity movement equalled that of the transport and communication sector. 1950-1966: Community, personal and social services and government services were obtained on the basis of the assumption that their productivity movement equalled that of the two sectors taken together. 1963-1984: finance, insurance and real estate was obtained on the basis of the assumption that its productivity movement equalled that of the wholesale and retail trade sector and the transport and communication sector taken together. Community, personal and social services was obtained on the basis of the assumption that its productivity movement equalled that of government services.

Sources:

1985-92 from CBS, *Nationale Rekeningen 1993*, with services weighted at 1990 factor values. 1984-85 from CBS, *Nationale Rekeningen 1990*; 1977-84 from CBS (1987), *Nationale Rekeningen, Tijdreeksen 1969-84*. 1969-77 from CBS (1985), *Nationale Rekeningen, Herziene Reeksen 1969-76*, except manufacturing which was calculated by the author separately by deflating value added in current prices by a producer price index. 1963-69 from CBS, *Nationale Rekeningen 1972*, except for manufacturing (as above) and mining which was derived as a residual from the industry index. 1960-63 from CBS, *Nationale Rekeningen 1966*, except for manufacturing (as above) and mining, utilities and construction which was derived as a residual from the industry index. Wholesale and retail trade, finance and insurance, community and social services and government services were obtained by using 1963 value added weights. 1955-60 from CBS, *Nationale Rekeningen 1963*, otherwise procedure as for 1960 using value added weights for 1958. 1949-55 from CBS, *Nationale Rekeningen 1960*, otherwise procedure as for 1960 using value added weights for 1953.

Spain

Notes:

The series before 1980 refer to GDP at factor cost, linked to series at producer prices from 1980 onwards.

Sources:

1950-64 (in 1958 prices) from Leandro Prados de la Escosura, *Spain's Gross Domestic Product, 1850-1990: A New Series*, Documentos de Trabajo D-93002, Ministeria de Economia y Hacienda, March 1993. 1964-71 (in 1970 prices) except industry from OECD, *National Accounts of OECD Countries 1950-78, volume I*; 1971-80 (in 1970 prices) except industry from OECD, *National Accounts, Detailed Tables, Volume II, 1971-83*; 1964-1981 industry from R. Gandoy Juste (1988), *Evolucion de la productividad global en la industria Española. Un analisis desagregado para el periodo 1964-1981*, Editorial de la Universidad Complutense de Madrid. 1980-87 (in 1980 prices) from OECD, *National Accounts, Detailed Tables, Volume II, 1975-87*; 1986-90 (in 1986 prices) from OECD, *National Accounts, Detailed Tables, Volume II, 1979-91*. 1990-1992 from updated provided by OECD.

Sweden

Notes:

The series for the whole period refer to basic values, i.e. net indirect taxes on production are included, but those on commodities are excluded.

Source:

Figures for 1950-70 from SCB (1972), *Nationalraekenskaper 1950-1971*, apart from "hotels and restaurants" which were shifted to "community, social and personal services" on the basis of shares (in 1968 prices) from OECD, *National Accounts of OECD Countries 1950-78, volume I*; figures for 1970-90 from SCB (1991), *Nationalraekenskaper 1970-1990*. 1990-1992 updated provided by OECD.

United Kingdom:

Notes:

The series for the whole period are at factor cost.

Sources:

1947-65 index series from C.H. Feinstein, *Statistical Tables of National Income, Expenditure and Output of the United Kingdom 1855-1965*. The series are weighted at the 1958 distribution of GDP from OECD, *National Accounts Statistics 1955-1964*. 1965-73, 1973-78, 1978-83, 1983-86 and 1986-93 on the basis of index series from CSO, *National Income and Expenditure* and (subsequently) *United Kingdom National Accounts*, making use of 1970, 1975, 1980, 1985 and 1990 current price weights respectively from OECD national accounts.

United States:

Notes:

The series for the whole period are at market prices.

Sources:

1947-1977 from BEA, *National Income and Product Accounts of the United States, 1929-1982*, Washington DC, 1986 (printout), linked in 1977 to new series; 1977-1987 from BEA, *Survey of Current Business*, January and April 1991; 1987-90 from BEA, *Survey of Current Business*, November 1993.

**Table 1.1 - Gross Value Added at Factor Cost by Sector of the Economy
Denmark, 1947-1992, millions of Kroner (1980 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Factor Cost
1947	8,637	616	16,209	240	6,700	10,760	11,433	9,436	13,043	18,027	95,101
1948	8,901	539	16,971	276	7,466	10,869	10,684	9,751	12,989	19,074	97,521
1949	9,661	284	18,754	322	8,709	11,763	11,140	10,053	12,859	19,238	102,785
1950	10,990	204	20,632	401	9,762	12,901	11,320	10,343	13,089	19,033	108,676
1951	10,863	344	20,396	434	9,706	12,552	12,502	10,485	12,844	20,121	110,247
1952	11,685	310	19,762	442	10,287	12,625	12,300	10,831	12,897	20,891	112,030
1953	12,698	190	20,577	525	11,453	13,490	12,345	11,417	13,312	22,533	118,539
1954	11,462	188	21,705	585	11,571	14,282	12,626	11,917	13,619	23,211	121,166
1955	11,733	216	21,509	719	10,990	14,322	13,707	12,071	13,734	24,073	123,074
1956	12,127	262	21,551	761	11,196	14,359	15,171	12,343	13,596	24,597	125,961
1957	13,767	301	23,250	719	11,622	15,620	15,210	12,867	13,887	25,521	132,764
1958	13,224	272	24,169	693	11,931	16,994	15,103	13,417	14,301	25,326	135,429
1959	12,405	284	27,049	897	13,837	18,768	16,139	14,460	14,808	26,640	145,286
1960	13,370	284	29,075	938	15,050	20,488	16,854	15,336	15,306	27,379	154,080
1961	14,209	296	31,034	955	17,310	21,840	17,422	15,947	15,736	28,046	162,796
1962	14,437	286	33,416	1,113	18,518	23,229	17,056	16,570	15,897	31,506	172,029
1963	13,517	272	33,537	1,302	18,847	23,567	18,115	17,434	16,488	32,656	175,733
1964	14,721	281	36,631	1,416	22,171	26,075	18,751	19,119	16,879	34,031	190,077
1965	15,025	272	38,480	1,514	23,702	27,696	19,696	20,792	16,971	35,468	199,617
1966	14,592	262	39,299	1,727	25,084	28,649	20,479	23,137	17,079	37,984	208,291
1967	14,940	224	40,913	1,791	27,064	30,029	20,152	25,358	16,918	40,909	218,297
1968	15,253	205	43,550	2,065	25,124	31,446	22,333	29,169	17,082	42,737	228,965
1969	15,269	195	46,501	2,576	27,881	33,237	23,127	33,094	17,708	45,137	244,726
1970	13,621	177	48,049	2,758	28,957	33,565	23,839	35,012	17,430	48,192	251,601
1971	14,964	166	48,853	2,798	29,913	33,650	23,608	38,059	17,727	49,648	259,386
1972	15,417	344	53,042	2,706	32,171	34,188	24,109	41,214	17,846	52,301	273,338
1973	14,285	344	55,978	3,076	29,328	38,345	25,261	45,341	18,095	55,113	285,166
1974	17,388	240	56,846	3,097	27,365	37,592	23,411	46,027	18,673	57,066	287,705
1975	16,259	264	55,471	3,407	24,442	37,309	22,223	46,214	18,549	58,402	282,540
1976	14,631	287	58,130	3,557	25,694	41,540	24,005	48,671	19,508	61,123	297,146
1977	16,633	784	58,387	3,953	25,091	41,498	24,717	48,878	20,072	64,008	304,021
1978	17,025	761	58,223	4,496	25,094	41,307	24,132	51,853	20,048	67,390	310,329
1979	17,107	857	61,530	4,936	23,286	42,714	26,966	54,660	20,404	71,187	323,647
1980	17,818	373	64,311	4,520	24,383	41,228	25,899	52,303	20,259	74,725	325,819
1981	19,294	948	62,267	4,183	20,169	40,004	26,215	51,790	20,355	78,208	323,433
1982	21,228	2,271	63,257	4,970	19,073	42,464	25,842	51,697	20,469	81,669	332,940
1983	19,404	2,508	67,510	5,153	18,499	44,893	25,532	53,771	20,382	82,180	339,832
1984	23,289	3,125	70,673	5,244	20,124	45,575	26,726	58,369	20,610	82,092	355,827
1985	23,191	4,991	72,920	6,064	21,431	49,131	26,477	60,030	21,080	83,924	369,239
1986	22,368	7,841	72,920	6,528	25,486	52,270	26,816	64,293	21,970	85,351	385,843
1987	21,311	10,074	69,933	6,356	26,573	53,018	30,349	65,132	21,336	85,801	389,883
1988	23,447	10,242	71,036	6,544	24,749	52,991	32,489	65,967	21,817	87,198	396,480
1989	25,274	12,402	71,869	6,397	23,045	51,055	34,130	68,775	21,430	87,140	401,517
1990	25,486	12,671	71,130	6,903	22,054	53,343	37,578	69,702	21,174	87,333	407,374
1991	25,175	15,163	70,301	6,249	18,923	55,488	38,114	67,377	22,077	87,311	406,178
1992	25,503	16,232	70,750	7,346	17,879	56,951	41,033	66,284	22,396	87,992	412,366

**Table 1.2 - Gross Value Added at Producer Prices by Sector of the Economy
France, 1950-92, million francs (1980 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Producer Prices
1947											
1948											
1949											
1950	68,414	17,380	137,838	5,230	62,478	87,214	34,867	98,262	50,333	196,518	758,532
1951	66,499	18,704	150,883	6,044	64,912	91,935	37,898	98,932	54,268	205,854	795,928
1952	67,966	19,797	153,458	6,451	63,623	95,191	38,808	100,049	56,649	217,449	819,442
1953	73,100	19,164	157,769	6,607	64,482	99,913	37,898	106,525	57,840	218,052	841,350
1954	77,704	19,912	164,963	7,265	70,852	105,449	39,977	110,321	60,254	220,310	877,008
1955	77,623	21,408	174,733	7,923	78,152	114,458	42,923	115,458	64,123	225,280	922,079
1956	70,289	21,523	191,221	8,706	81,014	122,598	45,998	116,574	67,529	234,165	959,617
1957	75,993	22,732	202,026	9,363	85,165	130,251	50,026	125,061	72,192	237,176	1,009,985
1958	76,238	23,940	209,024	10,271	89,459	130,251	51,888	138,013	73,945	238,381	1,041,411
1959	80,629	24,986	213,626	10,797	95,403	131,848	53,359	140,889	75,605	248,231	1,075,370
1960	89,057	26,458	231,670	12,373	97,519	143,070	56,468	147,245	80,813	255,977	1,140,649
1961	84,312	26,506	243,616	13,161	106,031	154,081	59,661	154,660	85,563	263,171	1,190,762
1962	93,831	27,503	259,461	14,474	113,990	170,473	63,358	156,324	89,941	270,586	1,259,943
1963	91,812	26,907	278,795	16,695	118,234	181,264	68,567	170,222	92,921	274,006	1,319,424
1964	94,234	28,235	307,582	16,733	132,419	191,300	74,610	182,193	96,935	282,288	1,406,528
1965	97,804	27,913	324,366	17,962	141,827	195,954	78,187	195,698	100,530	288,739	1,468,979
1966	97,320	27,320	354,451	19,050	148,787	208,379	83,322	199,650	106,781	293,133	1,538,192
1967	103,514	26,772	372,709	19,972	157,756	220,826	85,692	213,773	108,268	303,088	1,612,369
1968	106,057	26,084	394,499	21,441	158,913	231,619	86,577	231,193	106,758	319,009	1,682,149
1969	101,370	26,358	441,671	23,445	166,029	247,878	93,217	255,699	111,643	328,046	1,795,356
1970	105,525	26,446	481,283	25,772	175,169	249,227	98,566	278,358	116,522	337,773	1,894,641
1971	107,354	24,581	512,181	27,422	179,997	269,687	103,116	294,882	121,822	350,095	1,991,136
1972	107,878	24,072	544,431	30,032	189,519	284,714	112,160	314,395	129,276	360,963	2,097,441
1973	113,885	23,857	582,366	33,486	185,506	298,741	119,436	343,654	135,514	367,477	2,203,922
1974	113,620	23,420	601,105	35,767	192,478	307,900	122,328	370,214	143,006	371,712	2,281,550
1975	105,383	22,033	588,750	37,349	196,082	303,872	122,043	373,312	150,588	379,463	2,278,875
1976	101,174	22,319	630,296	39,570	190,354	323,449	131,034	390,952	159,128	401,743	2,390,018
1977	101,437	22,140	653,759	42,993	188,137	326,671	137,533	413,632	166,061	409,375	2,461,738
1978	112,086	24,114	667,908	45,611	187,507	334,417	146,936	420,411	172,661	425,787	2,537,438
1979	121,389	24,407	684,036	47,432	187,414	341,015	156,115	438,882	176,155	439,845	2,616,690
1980	119,024	23,821	679,520	50,308	193,609	337,760	164,194	472,578	178,547	448,211	2,667,572
1981	118,226	22,801	674,873	56,782	192,832	345,165	168,903	484,236	182,169	457,139	2,703,126
1982	138,019	19,313	680,762	57,846	192,720	351,810	174,577	493,065	191,857	472,369	2,772,338
1983	131,217	21,209	683,532	63,797	187,519	355,744	179,319	490,559	200,653	481,600	2,795,149
1984	137,323	20,407	671,038	70,040	183,153	361,274	184,483	507,082	210,245	489,752	2,834,797
1985	138,441	21,700	668,425	74,085	180,406	366,488	191,249	528,799	217,022	498,414	2,885,029
1986	139,457	20,745	667,256	77,261	185,861	377,092	198,339	566,336	226,552	505,807	2,964,706
1987	141,354	21,054	661,095	81,682	187,684	383,296	209,271	601,553	230,655	512,351	3,029,995
1988	140,801	20,275	700,521	83,221	202,688	391,035	228,695	623,157	240,118	526,532	3,157,043
1989	145,962	19,729	736,640	82,712	212,123	406,652	246,655	649,334	254,810	531,650	3,286,267
1990	147,909	19,869	750,295	85,126	213,303	421,007	258,759	650,613	268,873	540,572	3,356,326
1991	143,938	21,227	738,670	89,068	214,092	419,392	266,592	657,575	277,757	552,102	3,380,413
1992	153,784	20,962	740,283	90,117	214,990	421,570	276,523	656,925	285,641	563,156	3,423,951

**Table 1.3 - Gross Value Added at Producer Prices by Sector of the Economy
Germany, 1950-1992, millions of D-Marks (1985 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Producer Prices
1947											
1948											
1949											
1950	15,842	23,101	94,288	5,316	29,680	33,246	21,234	29,510	45,598	67,685	365,500
1951	18,295	25,796	108,505	6,263	33,092	35,463	23,464	32,390	48,795	70,133	402,196
1952	18,481	26,781	123,118	6,856	36,934	38,096	24,641	36,388	54,400	75,103	440,797
1953	18,625	26,256	137,643	7,181	44,650	41,464	25,682	40,131	60,268	78,768	480,667
1954	19,107	26,624	154,118	8,099	47,570	44,651	27,361	43,938	64,661	82,447	518,576
1955	18,912	29,119	180,749	9,121	55,286	49,876	31,453	48,688	71,250	87,476	581,929
1956	18,811	31,117	195,347	10,113	58,837	55,170	34,296	53,007	77,019	91,830	625,546
1957	19,394	31,179	208,671	10,794	57,822	59,632	35,803	57,054	83,247	99,218	662,814
1958	20,663	29,896	219,825	10,972	59,805	61,641	35,435	61,564	86,247	105,903	691,951
1959	21,390	30,432	240,623	11,831	66,691	67,268	37,923	67,354	91,934	110,081	745,527
1960	22,380	32,930	272,780	13,030	69,780	74,280	40,790	74,120	97,540	114,230	811,860
1961	20,490	32,380	289,120	13,240	72,970	78,130	42,610	78,090	102,120	119,620	848,770
1962	21,980	32,980	302,790	13,890	76,010	82,620	44,170	82,570	105,040	124,470	886,520
1963	22,700	33,020	308,770	14,790	77,750	84,730	45,700	86,410	108,450	129,690	912,010
1964	22,260	31,310	336,160	16,950	87,710	90,930	47,840	92,010	113,750	133,120	972,040
1965	21,180	29,950	361,750	17,400	91,130	96,900	49,780	96,420	121,000	138,420	1,023,930
1966	22,280	29,660	368,000	18,770	94,520	99,280	50,780	102,150	124,740	144,560	1,054,740
1967	24,160	25,990	359,770	19,420	90,560	99,090	50,510	108,750	127,730	148,830	1,054,810
1968	25,660	25,830	397,070	21,090	89,990	103,720	54,800	115,860	130,420	153,010	1,117,450
1969	24,980	25,610	443,490	24,280	91,920	113,710	59,890	121,450	138,310	157,270	1,200,910
1970	25,770	28,610	466,000	26,290	95,790	118,470	64,160	126,660	142,100	165,630	1,259,480
1971	27,030	25,660	470,920	28,090	101,770	123,300	64,480	132,300	148,890	172,770	1,295,210
1972	26,200	23,120	486,250	30,970	108,460	128,180	66,230	143,780	157,210	181,990	1,352,390
1973	28,860	23,640	517,310	34,370	109,250	133,070	70,280	151,070	163,110	190,870	1,421,830
1974	30,250	23,910	512,250	36,530	100,640	131,980	72,280	150,190	168,090	198,770	1,424,890
1975	28,730	19,920	488,080	36,130	94,600	130,500	70,250	162,850	171,800	204,800	1,407,660
1976	27,600	20,150	525,440	40,430	98,760	138,190	75,460	169,660	180,010	208,370	1,484,070
1977	29,180	18,420	535,130	42,540	100,900	144,580	79,440	177,980	189,410	211,910	1,529,490
1978	30,040	17,240	545,330	45,060	102,440	149,860	83,180	186,700	199,170	218,890	1,577,910
1979	28,670	18,800	572,390	47,310	105,260	154,170	89,970	195,700	208,660	226,120	1,647,050
1980	29,310	18,310	561,430	48,570	106,720	153,080	93,970	202,690	217,240	232,180	1,663,500
1981	29,440	17,730	555,850	47,760	102,150	151,090	95,640	208,650	224,580	237,830	1,670,720
1982	34,810	17,580	536,360	46,440	98,270	146,060	96,750	215,840	227,340	240,210	1,659,660
1983	32,100	16,630	543,600	47,400	100,020	148,990	97,780	220,390	236,240	242,150	1,685,300
1984	34,110	16,130	559,520	49,060	100,390	155,750	101,220	224,420	248,110	245,510	1,734,220
1985	31,920	16,050	578,850	50,480	94,810	156,410	105,050	231,870	258,960	249,940	1,774,340
1986	35,250	13,870	587,020	51,960	96,220	159,750	105,090	242,800	271,530	254,580	1,818,070
1987	32,120	13,950	575,590	54,860	94,540	162,330	109,500	251,830	286,780	258,640	1,840,140
1988	34,480	12,900	593,760	55,450	96,430	168,100	117,220	262,350	307,600	262,460	1,910,750
1989	34,970	13,897	614,123	57,389	100,489	175,117	123,073	271,455	325,584	264,573	1,980,670
1990	36,540	12,275	647,787	58,742	103,774	188,917	132,487	282,913	356,015	270,116	2,089,566
1991	34,080	13,645	671,966	62,236	104,123	210,322	138,436	290,120	388,295	276,127	2,189,350
1992	41,390	13,042	653,490	61,984	106,641	210,729	145,040	296,461	414,842	283,281	2,226,900

**Table 1.4 - Gross Value Added at Factor Cost by Sector of the Economy
Italy, 1951-1992, billions of Lire (1985 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade (a)	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services (a)	Government Services	GDP at Factor Cost
1947											
1948											
1949											
1950											
1951	20,540	3,383	21,989	4,750	16,859	24,059	9,064	21,714	22,011	37,580	181,948
1952	20,204	3,804	22,559	5,034	19,729	26,090	9,546	22,497	22,624	38,678	190,764
1953	22,479	4,250	24,265	5,207	22,663	27,606	10,437	23,287	23,333	39,737	203,264
1954	21,239	4,898	26,421	5,426	25,086	29,136	10,751	24,100	23,557	42,414	213,028
1955	22,443	5,705	28,163	5,782	28,086	30,978	12,058	25,300	24,254	43,777	226,546
1956	22,591	6,275	30,309	6,437	29,001	32,853	13,128	26,783	24,592	44,779	236,748
1957	22,996	6,887	32,211	6,888	31,557	35,199	13,852	28,202	25,364	46,465	249,621
1958	25,674	7,196	32,868	7,690	33,922	36,921	14,129	29,482	25,912	48,199	261,992
1959	26,707	7,969	36,473	8,386	36,429	39,549	15,133	31,235	26,708	50,121	278,710
1960	25,723	9,018	40,852	10,047	38,518	43,387	16,837	33,543	27,684	51,581	297,188
1961	28,132	9,954	45,320	11,016	41,645	48,221	18,636	35,811	28,836	53,390	320,960
1962	28,028	11,072	49,794	11,453	45,253	52,071	20,744	38,126	29,397	54,421	340,358
1963	28,789	11,397	53,930	12,160	48,126	57,181	21,129	40,386	30,376	55,624	359,098
1964	30,073	11,398	54,017	13,562	48,362	59,693	21,443	42,475	31,138	57,298	369,458
1965	31,047	12,499	56,360	14,811	45,500	61,385	22,006	44,852	31,813	59,405	379,679
1966	31,860	13,257	61,915	15,850	46,984	65,810	23,231	46,689	34,446	62,188	402,229
1967	33,376	14,936	67,832	17,392	49,458	72,068	24,046	48,499	36,185	63,542	427,334
1968	33,499	16,352	74,053	18,833	54,210	79,547	26,826	50,477	39,681	65,265	458,742
1969	34,694	17,196	79,019	20,425	57,529	87,339	30,021	51,870	41,848	66,440	486,382
1970	35,199	17,934	87,322	21,984	56,378	94,668	31,715	53,542	44,992	67,480	511,214
1971	35,219	18,453	88,683	22,741	54,209	96,815	32,606	57,168	46,587	69,940	522,421
1972	31,983	19,356	93,485	24,001	53,856	99,450	33,065	61,382	48,935	73,063	538,576
1973	34,214	18,525	107,755	26,333	55,807	107,495	35,333	67,233	49,847	75,517	578,059
1974	34,640	17,541	116,848	28,008	57,107	114,034	40,116	68,494	50,121	77,853	604,762
1975	36,018	15,740	111,104	21,800	54,713	113,289	36,477	68,742	50,266	80,092	588,241
1976	34,473	18,720	127,100	22,309	52,662	121,052	38,341	72,506	56,140	82,507	625,810
1977	34,368	19,546	131,674	23,491	52,104	125,746	39,205	74,999	58,455	84,821	644,409
1978	34,891	19,566	138,819	23,654	52,546	130,971	42,105	77,376	63,156	86,891	669,975
1979	36,616	21,117	154,188	23,684	53,634	138,723	48,245	78,964	67,771	88,386	711,328
1980	38,403	22,125	162,570	24,103	55,110	143,627	51,670	79,882	70,635	89,882	738,007
1981	38,178	21,242	159,854	23,668	54,735	144,897	52,995	82,418	72,691	91,065	741,743
1982	37,228	19,875	159,190	23,379	52,922	146,517	54,427	82,291	75,769	92,344	743,942
1983	40,865	19,898	160,548	22,593	53,273	147,674	54,269	83,295	77,888	93,495	753,798
1984	38,759	21,138	167,611	22,758	51,500	152,546	56,360	84,224	84,174	94,736	773,806
1985	39,237	21,602	173,371	22,793	51,527	154,700	59,077	87,764	89,064	96,007	795,142
1986	39,734	21,390	178,253	23,938	51,854	157,806	62,022	92,333	92,494	97,426	817,250
1987	41,466	22,619	185,613	24,594	52,589	164,080	64,291	93,847	95,754	98,845	843,698
1988	40,128	24,624	199,178	24,966	53,952	171,120	69,197	97,546	98,019	100,160	878,890
1989	40,653	25,488	206,795	25,681	55,850	174,736	73,121	101,831	101,495	101,031	906,681
1990	39,328	25,757	211,134	26,611	57,267	178,197	75,750	105,202	105,151	101,821	926,218
1991	42,646	24,500	210,975	26,937	57,992	180,545	77,944	106,638	107,499	102,517	938,193
1992	42,841	25,158	209,170	27,213	57,480	181,283	80,397	113,490	109,775	103,077	949,884

(a) hotels and restaurants are included with wholesale and retail trade.

**Table 1.5 - Gross Value Added at Factor Cost by Sector of the Economy
Netherlands, 1949-1992, millions of Guilders (1985 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Factor Cost
1947											
1948											
1949	4,630		14,116				5,066				103,300
1950	4,731	9,062	14,170	921	7,731	18,987	5,637	12,323	14,984	20,356	108,901
1951	4,983		12,767				6,137				110,432
1952	5,184		13,636				6,565				111,765
1953	5,033		15,781				7,136				119,635
1954	5,234		18,507				7,778				127,927
1955	5,486		19,793				8,420				137,938
1956	5,082		21,428				8,988				143,412
1957	5,428		22,943				9,556				147,049
1958	5,775		22,836				9,461				147,758
1959	5,197		25,306				9,934				155,158
1960	6,699	13,040	29,567	1,292	12,193	24,813	10,975	24,340	15,238	27,915	166,072
1961	6,229	13,178	30,750	1,377	13,337	25,785	11,097	26,062	15,495	28,585	171,895
1962	6,287	13,478	31,815	1,435	14,465	26,886	11,584	27,643	16,044	29,318	178,954
1963	5,876	13,515	33,175	1,545	15,508	28,398	12,194	29,003	16,878	30,204	186,296
1964	6,898	13,045	37,601	1,748	18,462	31,279	13,091	32,053	17,315	30,945	202,437
1965	6,898	12,434	41,378	1,952	19,200	33,337	17,395	37,386	16,200	28,840	215,019
1966	6,728	15,736	42,032	2,195	20,431	33,337	14,167	36,119	19,070	31,465	221,279
1967	7,494	14,500	44,851	2,602	22,400	34,983	14,525	39,285	19,722	31,874	232,236
1968	7,835	16,761	48,129	3,090	24,616	36,218	15,960	41,048	19,903	33,100	246,659
1969	8,090	20,017	52,787	3,537	23,877	38,276	17,036	48,788	16,869	34,734	264,011
1970	8,464	22,712	54,943	3,953	24,770	40,495	18,517	50,976	17,430	36,691	278,950
1971	8,713	26,176	57,668	4,369	25,885	41,049	19,258	52,865	18,779	38,159	292,921
1972	8,961	31,566	59,866	4,994	25,885	41,604	19,505	53,648	19,665	39,626	305,320
1973	9,833	35,415	66,170	5,479	25,885	44,378	19,999	42,668	33,395	41,583	324,805
1974	10,455	38,495	68,642	5,826	24,323	46,597	20,986	47,632	33,238	43,051	339,243
1975	10,331	39,649	61,537	6,034	23,877	47,151	20,739	50,771	34,804	43,051	337,945
1976	10,455	41,959	65,410	6,520	23,431	49,370	21,727	53,642	36,251	45,008	353,772
1977	10,828	41,189	62,404	6,520	23,654	51,589	22,468	57,746	36,953	46,475	359,827
1978	11,589	37,936	64,277	6,891	23,475	53,182	22,966	61,343	38,033	47,558	367,250
1979	12,174	40,130	66,333	6,849	22,129	55,490	24,163	65,257	37,902	48,445	378,873
1980	12,461	37,823	66,665	7,010	22,421	54,940	24,936	67,799	38,619	49,232	381,907
1981	14,205	34,381	66,665	6,989	20,627	52,578	25,984	68,456	39,984	50,168	380,037
1982	15,377	29,388	65,798	7,207	19,573	52,083	25,660	69,186	40,352	50,315	374,939
1983	15,863	31,733	66,917	7,263	18,968	51,919	26,059	71,017	39,962	50,118	379,819
1984	16,834	32,490	70,798	7,347	19,528	54,226	27,804	76,137	37,750	50,168	393,083
1985	16,199	35,251	72,639	7,543	19,663	56,204	28,627	80,640	36,491	50,660	403,917
1986	17,662	32,726	74,415	7,873	20,247	59,183	29,356	84,079	36,638	51,797	413,975
1987	16,889	33,911	75,430	7,983	20,691	59,454	29,980	86,342	37,790	52,554	421,023
1988	17,767	29,859	78,305	8,203	22,722	61,283	30,952	88,989	38,072	53,041	429,192
1989	19,000	30,856	81,856	8,203	23,072	64,465	32,687	94,928	38,450	53,529	447,046
1990	20,902	31,168	84,562	8,456	23,353	67,716	34,699	99,425	39,417	54,124	463,822
1991	21,550	33,880	84,901	8,744	23,119	70,763	37,163	101,700	40,275	54,449	476,542
1992	21,780	34,160	84,309	8,803	22,699	71,169	39,141	102,454	39,970	54,828	479,312

**Table 1.6 - Gross Value Added at Producer Prices by Sector of the Economy
Spain, 1947-1992, billions of Pesetas (1986 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Producer Prices
1947	921	86	596	28	222	980	153	919	749	613	5,266
1948	871	91	581	29	224	980	161	902	753	577	5,169
1949	874	94	561	27	227	976	165	896	765	586	5,171
1950	883	98	615	33	238	1,007	176	921	761	573	5,304
1951	1,093	105	654	39	238	1,075	174	934	796	651	5,760
1952	1,082	114	771	44	244	1,142	198	1,038	824	691	6,148
1953	1,034	116	788	47	265	1,203	221	1,033	839	721	6,269
1954	1,092	118	842	49	318	1,244	220	1,107	887	825	6,702
1955	1,060	122	930	56	357	1,343	229	1,181	905	810	6,993
1956	1,040	129	1,002	64	370	1,360	265	1,271	951	1,035	7,486
1957	1,126	139	1,063	68	386	1,424	289	1,362	993	1,073	7,923
1958	1,105	144	1,135	76	440	1,494	301	1,426	1,038	1,090	8,250
1959	1,165	135	1,146	80	427	1,571	303	1,458	1,058	1,047	8,392
1960	1,172	138	1,180	86	463	1,694	306	1,504	1,132	1,196	8,871
1961	1,242	142	1,392	96	456	1,824	345	1,655	1,175	1,285	9,613
1962	1,222	136	1,566	105	504	1,981	371	1,860	1,206	1,555	10,506
1963	1,438	136	1,655	119	584	2,098	414	2,143	1,323	1,702	11,611
1964	1,312	134	1,831	135	667	2,171	463	2,412	1,369	1,709	12,202
1965	1,240	154	2,111	147	785	2,259	508	2,558	1,455	1,751	12,969
1966	1,310	149	2,395	157	908	2,447	551	2,654	1,548	1,780	13,898
1967	1,362	142	2,640	165	1,062	2,572	622	2,791	1,618	1,803	14,777
1968	1,364	143	2,836	184	1,143	2,697	655	2,951	1,768	1,845	15,586
1969	1,387	179	3,279	215	1,222	2,966	717	3,093	1,964	1,935	16,957
1970	1,375	179	3,607	231	1,297	3,084	793	3,230	2,085	1,985	17,867
1971	1,520	196	3,904	242	1,338	3,189	865	3,395	2,209	2,052	18,912
1972	1,523	205	4,527	272	1,477	3,419	964	3,606	2,334	2,130	20,456
1973	1,580	199	5,095	343	1,740	3,658	1,065	3,849	2,490	2,251	22,270
1974	1,694	219	5,689	388	1,935	3,823	1,163	4,042	2,595	2,419	23,966
1975	1,691	222	5,939	416	1,976	3,868	1,212	4,257	2,725	2,529	24,836
1976	1,765	217	6,384	434	1,986	3,973	1,291	4,437	2,796	2,678	25,960
1977	1,690	229	6,774	467	2,021	4,072	1,384	4,626	2,914	2,802	26,979
1978	1,802	222	7,071	542	2,013	4,186	1,450	4,645	2,993	2,934	27,859
1979	1,729	228	7,250	623	2,017	4,186	1,495	4,792	2,980	3,060	28,360
1980	1,883	251	7,608	596	2,035	4,211	1,525	4,924	2,936	3,163	29,132
1981	1,704	247	7,421	658	2,013	4,127	1,566	4,983	3,011	3,264	28,996
1982	1,678	229	7,552	677	2,067	4,152	1,577	5,059	3,156	3,401	29,548
1983	1,783	219	7,730	678	2,069	4,235	1,618	5,088	3,191	3,525	30,134
1984	1,936	215	7,774	750	1,941	4,324	1,663	5,247	3,265	3,634	30,749
1985	1,997	209	7,918	787	1,985	4,406	1,725	5,355	3,290	3,786	31,458
1986	1,815	246	8,322	859	2,103	4,560	1,755	5,423	3,474	3,941	32,499
1987	2,025	224	8,751	899	2,278	4,756	1,829	5,697	3,685	4,165	34,311
1988	2,092	226	9,128	969	2,509	4,968	1,904	6,017	3,832	4,419	36,063
1989	1,953	251	9,491	956	2,848	5,190	2,016	6,327	4,067	4,725	37,824
1990	2,017	255	9,628	987	3,137	5,319	2,113	6,591	4,153	5,045	39,246
1991	1,979	(a)	10,898	(a)	3,251	(b)	(b)	(b)	15,998	5,290	37,416
1992	1,936	(a)	10,781	(a)	3,109	(b)	(b)	(b)	16,432	5,458	37,716

(a) included with manufacturing

(b) included with community, social and personal services

Table A.5
Gross Domestic Product in Producer and Distributive Services at Factor Cost,
Employment and Labour Productivity, Capital Intensity and Joint Factor Productivity,
1950-1990 (1950 = 100)

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>GDP in Producer and Distributive Services at constant prices</i>									
1950	100	100	100	100	100	100	100	100	100
1960	152	157	225	171	163	167	148	127	145
1973	315	346	422	383	290	407	253	189	259
1979	360	425	524	485	392	498	290	207	323
1990	465	604	720	655	546	666	407	308	447
<i>Employment</i>									
1950	100	100	100	100	100	100	100	100	100
1960	111	106	157	139	124	130	137	113	116
1973	135	141	172	170	150	240	161	127	156
1979	136	155	175	197	171	246	171	134	188
1990	147	181	189	241	215	273	203	168	237
<i>GDP in Producer and Distributive Services per Person Employed</i>									
1950	100	100	100	100	100	100	100	100	100
1960	137	149	143	123	131	128	108	113	125
1973	234	245	245	225	194	170	158	149	166
1979	265	275	300	246	230	202	40	155	172
1990	315	334	380	272	254	244	200	184	189
<i>Non-Residential Capital Stock per Person Employed</i>									
1950		100	100					100	100
1960		111	101					136	106
1973		146	194					260	131
1979		189	238					327	138
1989		239	302					452	174
<i>GDP in Producer and Distributive Services per Joint Unit of Labour and Capital</i>									
1950		100	100					100	100
1960		142	143					100	122
1973		207	179					102	148
1979		206	199					98	150
1989		226	219					104	150

^a estimates for 1950 refer to 1951.

Source: see table A.1.

Table A.6
Gross Domestic Product in Personal and Social Services at Factor Cost, Employment
and Labour Productivity, Capital Intensity and Joint Factor Productivity,
1950-1990 (1950 = 100)

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>GDP in Personal and Social Services at constant prices</i>									
1950	100	100	100	100	100	100	100	100	100
1960	133	136	187	133	122	175	134	109	142
1973	228	204	312	210	212	356	209	144	226
1979	285	250	384	262	244	453	254	163	265
1990	338	328	553	347	265	690	302	185	359
<i>Employment</i>									
1950	100	100	100	100	100	100	100	100	100
1960	122	104	137	119	108	100	122	103	137
1973	207	130	188	157	157	125	186	121	200
1979	256	145	222	187	188	135	234	134	237
1990	293	178	281	259	234	193	277	172	324
<i>GDP in Personal and Social Services per Person Employed</i>									
1950	100	100	100	100	100	100	100	100	100
1960	109	131	137	111	113	174	110	105	104
1973	110	156	166	134	135	285	112	119	113
1979	112	172	173	140	130	336	109	121	112
1990	115	184	197	134	113	358	109	108	111
<i>Non-Residential Capital Stock per Person Employed</i>									
1950		100	100					100	100
1960		115	103					121	97
1973		206	180					227	106
1979		259	210					251	102
1989		346	254					267	92
<i>GDP in Personal and Social Services per Joint Unit of Labour and Capital</i>									
1950		100	100					100	100
1960		127	136					104	106
1973		133	143					111	109
1979		139	144					112	110
1989		138	152					102	117

^a estimates for 1950 refer to 1951.
Source: see table A.1.

Table A.7
Gross Domestic Product of the Total Economy at Factor Cost, Employment and Labour
Productivity, Capital Intensity and Joint Factor Productivity, 1950-1990
(1950 = 100)

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>Total Economy GDP at constant prices</i>									
1950	100	100	100	100	100	100	100	100	100
1960	142	150	222	163	152	167	138	125	141
1973	262	291	389	318	298	420	235	176	229
1979	298	345	451	391	348	535	262	191	265
1990	375	442	572	509	426	740	337	241	348
<i>Employment</i>									
1950	100	100	100	100	100	100	100	100	100
1960	107	100	126	105	112	108	110	107	114
1973	120	109	131	102	126	126	119	110	149
1979	123	110	129	109	134	119	127	111	172
1990	129	113	138	117	152	121	138	120	208
<i>Total Economy GDP per Person Employed</i>									
1950	100	100	100	100	100	100	100	100	100
1960	133	151	176	156	136	155	125	116	123
1973	218	267	296	312	237	333	197	161	154
1979	242	314	350	359	259	448	207	172	154
1990	291	393	414	435	280	611	244	201	168
<i>Non-Residential Capital Stock per Person Employed</i>									
1950		100	100					100	100
1960		119	137					137	118
1973		207	300					262	147
1979		271	381					315	154
1989		374	480					384	167
<i>Total Economy GDP per Joint Unit of Labour and Capital</i>									
1950		100	100					100	100
1960		143	160					108	118
1973		214	213					127	138
1979		253	256					130	137
1989		284	276					148	145

^a estimates for 1950 refer to 1951.

Source: see table A.1.

Table A.8
Relative Level of Gross Value Added per Person Employed
for Each Industry compared to the Total Economy

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>Agriculture</i>									
1950	73	61	45	44	105	66	49	96	63
1960	64	46	43	39	111	53	51	84	62
1973	72	67	42	48	104	47	59	99	112
1979	65	58	44	47	75	44	63	80	105
1990	78	64	45	38	92	44	76	85	79
<i>Industry</i>									
1950	107	136	115	141	102	121	130	102	112
1960	103	134	111	118	104	134	121	104	122
1973	94	106	103	103	102	113	110	101	116
1979	95	104	103	106	106	115	112	108	123
1990	98	104	101	106	116	110	113	118	127
<i>Manufacturing</i>									
1950	106	155	119	135	107	132	148	103	110
1960	96	147	109	107	108	141	140	103	117
1973	85	112	103	95	97	114	104	96	110
1979	93	108	103	102	90	133	101	96	114
1990	91	109	101	103	105	109	102	112	122
<i>Services</i>									
1950	111	92	120	152	97	137	102	99	100
1960	114	97	107	141	95	130	98	97	93
1973	108	103	106	116	98	119	98	99	92
1979	107	104	103	111	99	110	97	96	91
1990	103	101	103	107	95	105	96	93	93
<i>Producer and Distributive Services</i>									
1950	132	104	160	180	104	229		105	124
1960	136	111	126	165	95	193		100	132
1973	138	132	123	138	105	121	118	118	127
1979	144	131	123	137	106	105	116	116	124
1990	143	134	125	130	116	137	125	119	124
<i>Personal and Social Services</i>									
1950	81	82	83	123	88	82		92	78
1960	85	86	86	112	94	80		94	61
1973	81	75	92	93	90	115	82	76	66
1979	79	79	88	82	90	116	83	72	65
1990	74	72	89	85	71	78	75	63	71

^a 1950 refers to 1951.

Source: see table A.1.

Table A.9
Share of Employment by Sector, 1950-1990
(as a percentage of total employment)

	Denmark	France	Germany	Italy ^a	Nether- lands	Spain	Sweden	United Kingdom	United States
<i>Agriculture</i>									
1950	26	24	24	45	13	47	23	6	11
1960	20	21	14	33	9	40	15	5	7
1973	10	11	7	17	5	23	7	3	4
1979	8	9	5	14	5	18	6	3	3
1990	6	6	3	10	5	11	4	2	3
<i>Industry</i>									
1950	32	35	43	26	39	22	38	45	33
1960	35	36	48	32	41	28	39	46	31
1973	34	38	47	38	37	36	36	42	29
1979	29	35	44	36	32	36	32	38	27
1990	27	29	40	30	26	32	29	28	22
<i>Manufacturing</i>									
1950	24	25	32	18	28	16	28	34	25
1960	26	25	37	20	29	20	29	35	24
1973	24	27	37	24	26	25	26	32	22
1979	20	25	34	24	22	25	24	29	20
1990	20	20	31	20	18	22	21	20	15
<i>Services</i>									
1950	42	41	33	28	48	31	39	49	56
1960	45	43	38	35	50	32	46	49	62
1973	57	51	45	46	58	41	57	55	67
1979	63	56	51	50	63	46	62	59	70
1990	67	65	57	61	70	57	68	69	76
<i>Producer and Distributive Services</i>									
1950	24	19	16	14	26	12	20	26	28
1960	26	20	20	19	29	14	24	28	28
1973	27	25	21	24	31	22	26	30	29
1979	27	27	22	26	33	24	26	32	31
1990	28	31	22	30	37	26	29	37	32
<i>Personal and Social Services</i>									
1950	17	22	17	14	21	19	19	23	28
1960	20	23	19	16	21	18	21	22	34
1973	30	26	25	22	27	19	30	25	38
1979	36	29	30	24	30	22	36	27	39
1990	39	35	35	31	33	31	39	33	44

^a 1950 refers to 1951.

Source: see table A.1.

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APPENDIX TO "SECTORAL GROWTH ACCOUNTING AND STRUCTURAL CHANGE"

Gross Value Added in Constant Prices

(FIGURES WITHIN LINED AREAS ARE ESTIMATED AS DESCRIBED IN THE NOTES)

Denmark

Notes:

The estimates are all at factor cost.

Original GDP estimates for 1947-1966 are expressed in "1955 prices", for 1966-1971 in "1970 prices" and for 1971-92 in 1980 prices, although the original base years have changed more frequently.

Sources:

GDP 1947-66 from Danmarks Statistik, "Reviderede tideserier for produktionsvaerdi og bruttofaktorindkomst for perioden 1947-1965", Copenhagen, mimeographed. GDP 1966-90 from Danmarks Statistik, *Nationalregnskabsstatistik 1982, 1987 and 1993*, Copenhagen.

France

Notes:

Before 1962 original series are at market prices, linked to series at producer prices from 1962 onwards.

The classification of activities in the French national accounts (INSEE, *Les Comptes de la Nation*, various issues) differed in some respects from the International Standard Industrial Classification. Most important are the inclusion of mining activities in manufacturing, and the distinction between "market" and "non market" services instead of between "government" and "non-government". OECD adjusted the estimates to their common classification scheme, which I could not do directly on the basis of the French national accounts. I therefore relied on the OECD National Accounts for the whole period.

Sources:

1950-58 (in 1954 prices) from OECD, *Statistics of National Accounts 1950-1961*; 1958-62 (in 1958 prices) from OECD, *National Accounts Statistics 1955-1964*; 1962-71 (in 1970 prices) from OECD, *National Accounts of OECD Countries 1950-78, volume I*; 1971-77 (in 1970 prices) from OECD, *National Accounts, Detailed Tables, Volume II, 1971-83*; 1977-1990 (in 1980 prices) from OECD, *National Accounts, Detailed Tables, Volume II, 1980-92*.

Germany

Notes:

Figures for the whole period are at producer prices.

Original GDP estimates in Germany for 1960-1990 are expressed in "1985 prices" and for 1950-1960 in "1976 prices"; although the original base years were changed more frequently (see Maddison, 1996).

Original series for 1950-59 exclude Saarland and Berlin.

The figures for repair and maintenance are included with manufacturing.

Sources:

1950-59 from Statistisches Bundesamt, *Volkswirtschaftlich Gesamtrechnungen, Lange Reihen, 1950-84*, pp. 72-73; 1960-87 from *Volkswirtschaftliche Gesamtrechnungen, Revidierte Ergebnisse 1950-1990*, Fachserie 18, Reihe S.15, pp. 117-120. GDP 1987-92 from *Volkswirtschaftliche Gesamtrechnungen, Hauptbericht 1993 and 1994*, Fachserie 18.

Italy

Notes:

The estimates for the whole period are at factor cost.

Sources:

Updated series belonging to R. Golinelli and M. Monterastelli, *Un metodo per la ricostruzione de serie storiche compatibili con la nuova contabilità nazionale (1959-1989)*, Nota di lavoro no. 9001, Promoteia, November 1990. The updated series which go up to 1992 and are rebased from 1980 to 1985 prices, were kindly provided by Roberto Golinelli (October 1993). These series are entirely compatible with the Italian national accounts from ISTAT, *Contabilità nazionale 1970-1992*.

Netherlands

Notes:

Government excludes government organisations outside the "government sector", which are included in the industry estimates.

The estimates for the whole period are at factor cost. The 1985 estimate is also at factor cost but unadjusted for the difference in value tax received and value added tax paid.

1950-1963: mining, public utilities and construction were obtained on the basis of the assumption that their productivity movement equalled that of the three sectors taken together. Wholesale and retail trade and finance, insurance and real estate were obtained on the basis of the assumption that their productivity movement equalled that of the transport and communication sector. 1950-1966: Community, personal and social services and government services were obtained on the basis of the assumption that their productivity movement equalled that of the two sectors taken together. 1963-1984: finance, insurance and real estate was obtained on the basis of the assumption that its productivity movement equalled that of the wholesale and retail trade sector and the transport and communication sector taken together. Community, personal and social services was obtained on the basis of the assumption that its productivity movement equalled that of government services.

Sources:

1985-92 from CBS, *Nationale Rekeningen 1993*, with services weighted at 1990 factor values. 1984-85 from CBS, *Nationale Rekeningen 1990*; 1977-84 from CBS (1987), *Nationale Rekeningen, Tijdreeksen 1969-84*. 1969-77 from CBS (1985), *Nationale Rekeningen, Herziene Reeksen 1969-76*, except manufacturing which was calculated by the author separately by deflating value added in current prices by a producer price index. 1963-69 from CBS, *Nationale Rekeningen 1972*, except for manufacturing (as above) and mining which was derived as a residual from the industry index. 1960-63 from CBS, *Nationale Rekeningen 1966*, except for manufacturing (as above) and mining, utilities and construction which was derived as a residual from the industry index. Wholesale and retail trade, finance and insurance, community and social services and government services were obtained by using 1963 value added weights. 1955-60 from CBS, *Nationale Rekeningen 1963*, otherwise procedure as for 1960 using value added weights for 1958. 1949-55 from CBS, *Nationale Rekeningen 1960*, otherwise procedure as for 1960 using value added weights for 1953.

Spain

Notes:

The series before 1980 refer to GDP at factor cost, linked to series at producer prices from 1980 onwards.

Sources:

1950-64 (in 1958 prices) from Leandro Prados de la Escosura, *Spain's Gross Domestic Product, 1850-1990: A New Series*, Documentos de Trabajo D-93002, Ministeria de Economia y Hacienda, March 1993. 1964-71 (in 1970 prices) except industry from OECD, *National Accounts of OECD Countries 1950-78, volume I*; 1971-80 (in 1970 prices) except industry from OECD, *National Accounts, Detailed Tables, Volume II, 1971-83*; 1964-1981 industry from R. Gandoy Juste (1988), *Evolucion de la productividad global en la industria Española. Un analisis desagregado para el periodo 1964-1981*, Editorial de la Universidad Complutense de Madrid. 1980-87 (in 1980 prices) from OECD, *National Accounts, Detailed Tables, Volume II, 1975-87*; 1986-90 (in 1986 prices) from OECD, *National Accounts, Detailed Tables, Volume II, 1979-91*. 1990-1992 from updated provided by OECD.

Sweden

Notes:

The series for the whole period refer to basic values, i.e. net indirect taxes on production are included, but those on commodities are excluded.

Source:

Figures for 1950-70 from SCB (1972), *Nationalraekenskaper 1950-1971*, apart from "hotels and restaurants" which were shifted to "community, social and personal services" on the basis of shares (in 1968 prices) from OECD, *National Accounts of OECD Countries 1950-78, volume I*; figures for 1970-90 from SCB (1991), *Nationalraekenskaper 1970-1990*. 1990-1992 updated provided by OECD.

United Kingdom:

Notes:

The series for the whole period are at factor cost.

Sources:

1947-65 index series from C.H. Feinstein, *Statistical Tables of National Income, Expenditure and Output of the United Kingdom 1855-1965*. The series are weighted at the 1958 distribution of GDP from OECD, *National Accounts Statistics 1955-1964*. 1965-73, 1973-78, 1978-83, 1983-86 and 1986-93 on the basis of index series from CSO, *National Income and Expenditure* and (subsequently) *United Kingdom National Accounts*, making use of 1970, 1975, 1980, 1985 and 1990 current price weights respectively from OECD national accounts.

United States:

Notes:

The series for the whole period are at market prices.

Sources:

1947-1977 from BEA, *National Income and Product Accounts of the United States, 1929-1982*, Washington DC, 1986 (printout), linked in 1977 to new series; 1977-1987 from BEA, *Survey of Current Business*, January and April 1991; 1987-90 from BEA, *Survey of Current Business*, November 1993.

**Table 1.1 - Gross Value Added at Factor Cost by Sector of the Economy
Denmark, 1947-1992, millions of Kroner (1980 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Factor Cost
1947	8,637	616	16,209	240	6,700	10,760	11,433	9,436	13,043	18,027	95,101
1948	8,901	539	16,971	276	7,466	10,869	10,684	9,751	12,989	19,074	97,521
1949	9,661	284	18,754	322	8,709	11,763	11,140	10,053	12,859	19,238	102,785
1950	10,990	204	20,632	401	9,762	12,901	11,320	10,343	13,089	19,033	108,676
1951	10,863	344	20,396	434	9,706	12,552	12,502	10,485	12,844	20,121	110,247
1952	11,685	310	19,762	442	10,287	12,625	12,300	10,831	12,897	20,891	112,030
1953	12,698	190	20,577	525	11,453	13,490	12,345	11,417	13,312	22,533	118,539
1954	11,462	188	21,705	585	11,571	14,282	12,626	11,917	13,619	23,211	121,166
1955	11,733	216	21,509	719	10,990	14,322	13,707	12,071	13,734	24,073	123,074
1956	12,127	262	21,551	761	11,196	14,359	15,171	12,343	13,596	24,597	125,961
1957	13,767	301	23,250	719	11,622	15,620	15,210	12,867	13,887	25,521	132,764
1958	13,224	272	24,169	693	11,931	16,994	15,103	13,417	14,301	25,326	135,429
1959	12,405	284	27,049	897	13,837	18,768	16,139	14,460	14,808	26,640	145,286
1960	13,370	284	29,075	938	15,050	20,488	16,854	15,336	15,306	27,379	154,080
1961	14,209	296	31,034	955	17,310	21,840	17,422	15,947	15,736	28,046	162,796
1962	14,437	286	33,416	1,113	18,518	23,229	17,056	16,570	15,897	31,506	172,029
1963	13,517	272	33,537	1,302	18,847	23,567	18,115	17,434	16,488	32,656	175,733
1964	14,721	281	36,631	1,416	22,171	26,075	18,751	19,119	16,879	34,031	190,077
1965	15,025	272	38,480	1,514	23,702	27,696	19,696	20,792	16,971	35,468	199,617
1966	14,592	262	39,299	1,727	25,084	28,649	20,479	23,137	17,079	37,984	208,291
1967	14,940	224	40,913	1,791	27,064	30,029	20,152	25,358	16,918	40,909	218,297
1968	15,253	205	43,550	2,065	25,124	31,446	22,333	29,169	17,082	42,737	228,965
1969	15,269	195	46,501	2,576	27,881	33,237	23,127	33,094	17,708	45,137	244,726
1970	13,621	177	48,049	2,758	28,957	33,565	23,839	35,012	17,430	48,192	251,601
1971	14,964	166	48,853	2,798	29,913	33,650	23,608	38,059	17,727	49,648	259,386
1972	15,417	344	53,042	2,706	32,171	34,188	24,109	41,214	17,846	52,301	273,338
1973	14,285	344	55,978	3,076	29,328	38,345	25,261	45,341	18,095	55,113	285,166
1974	17,388	240	56,846	3,097	27,365	37,592	23,411	46,027	18,673	57,066	287,705
1975	16,259	264	55,471	3,407	24,442	37,309	22,223	46,214	18,549	58,402	282,540
1976	14,631	287	58,130	3,557	25,694	41,540	24,005	48,671	19,508	61,123	297,146
1977	16,633	784	58,387	3,953	25,091	41,498	24,717	48,878	20,072	64,008	304,021
1978	17,025	761	58,223	4,496	25,094	41,307	24,132	51,853	20,048	67,390	310,329
1979	17,107	857	61,530	4,936	23,286	42,714	26,966	54,660	20,404	71,187	323,647
1980	17,818	373	64,311	4,520	24,383	41,228	25,899	52,303	20,259	74,725	325,819
1981	19,294	948	62,267	4,183	20,169	40,004	26,215	51,790	20,355	78,208	323,433
1982	21,228	2,271	63,257	4,970	19,073	42,464	25,842	51,697	20,469	81,669	332,940
1983	19,404	2,508	67,510	5,153	18,499	44,893	25,532	53,771	20,382	82,180	339,832
1984	23,289	3,125	70,673	5,244	20,124	45,575	26,726	58,369	20,610	82,092	355,827
1985	23,191	4,991	72,920	6,064	21,431	49,131	26,477	60,030	21,080	83,924	369,239
1986	22,368	7,841	72,920	6,528	25,486	52,270	26,816	64,293	21,970	85,351	385,843
1987	21,311	10,074	69,933	6,356	26,573	53,018	30,349	65,132	21,336	85,801	389,883
1988	23,447	10,242	71,036	6,544	24,749	52,991	32,489	65,967	21,817	87,198	396,480
1989	25,274	12,402	71,869	6,397	23,045	51,055	34,130	68,775	21,430	87,140	401,517
1990	25,486	12,671	71,130	6,903	22,054	53,343	37,578	69,702	21,174	87,333	407,374
1991	25,175	15,163	70,301	6,249	18,923	55,488	38,114	67,377	22,077	87,311	406,178
1992	25,503	16,232	70,750	7,346	17,879	56,951	41,033	66,284	22,396	87,992	412,366

**Table 1.2 - Gross Value Added at Producer Prices by Sector of the Economy
France, 1950-92, million francs (1980 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Producer Prices
1947											
1948											
1949											
1950	68,414	17,380	137,838	5,230	62,478	87,214	34,867	98,262	50,333	196,518	758,532
1951	66,499	18,704	150,883	6,044	64,912	91,935	37,898	98,932	54,268	205,854	795,928
1952	67,966	19,797	153,458	6,451	63,623	95,191	38,808	100,049	56,649	217,449	819,442
1953	73,100	19,164	157,769	6,607	64,482	99,913	37,898	106,525	57,840	218,052	841,350
1954	77,704	19,912	164,963	7,265	70,852	105,449	39,977	110,321	60,254	220,310	877,008
1955	77,623	21,408	174,733	7,923	78,152	114,458	42,923	115,458	64,123	225,280	922,079
1956	70,289	21,523	191,221	8,706	81,014	122,598	45,998	116,574	67,529	234,165	959,617
1957	75,993	22,732	202,026	9,363	85,165	130,251	50,026	125,061	72,192	237,176	1,009,985
1958	76,238	23,940	209,024	10,271	89,459	130,251	51,888	138,013	73,945	238,381	1,041,411
1959	80,629	24,986	213,626	10,797	95,403	131,848	53,359	140,889	75,605	248,231	1,075,370
1960	89,057	26,458	231,670	12,373	97,519	143,070	56,468	147,245	80,813	255,977	1,140,649
1961	84,312	26,506	243,616	13,161	106,031	154,081	59,661	154,660	85,563	263,171	1,190,762
1962	93,831	27,503	259,461	14,474	113,990	170,473	63,358	156,324	89,941	270,586	1,259,943
1963	91,812	26,907	278,795	16,695	118,234	181,264	68,567	170,222	92,921	274,006	1,319,424
1964	94,234	28,235	307,582	16,733	132,419	191,300	74,610	182,193	96,935	282,288	1,406,528
1965	97,804	27,913	324,366	17,962	141,827	195,954	78,187	195,698	100,530	288,739	1,468,979
1966	97,320	27,320	354,451	19,050	148,787	208,379	83,322	199,650	106,781	293,133	1,538,192
1967	103,514	26,772	372,709	19,972	157,756	220,826	85,692	213,773	108,268	303,088	1,612,369
1968	106,057	26,084	394,499	21,441	158,913	231,619	86,577	231,193	106,758	319,009	1,682,149
1969	101,370	26,358	441,671	23,445	166,029	247,878	93,217	255,699	111,643	328,046	1,795,356
1970	105,525	26,446	481,283	25,772	175,169	249,227	98,566	278,358	116,522	337,773	1,894,641
1971	107,354	24,581	512,181	27,422	179,997	269,687	103,116	294,882	121,822	350,095	1,991,136
1972	107,878	24,072	544,431	30,032	189,519	284,714	112,160	314,395	129,276	360,963	2,097,441
1973	113,885	23,857	582,366	33,486	185,506	298,741	119,436	343,654	135,514	367,477	2,203,922
1974	113,620	23,420	601,105	35,767	192,478	307,900	122,328	370,214	143,006	371,712	2,281,550
1975	105,383	22,033	588,750	37,349	196,082	303,872	122,043	373,312	150,588	379,463	2,278,875
1976	101,174	22,319	630,296	39,570	190,354	323,449	131,034	390,952	159,128	401,743	2,390,018
1977	101,437	22,140	653,759	42,993	188,137	326,671	137,533	413,632	166,061	409,375	2,461,738
1978	112,086	24,114	667,908	45,611	187,507	334,417	146,936	420,411	172,661	425,787	2,537,438
1979	121,389	24,407	684,036	47,432	187,414	341,015	156,115	438,882	176,155	439,845	2,616,690
1980	119,024	23,821	679,520	50,308	193,609	337,760	164,194	472,578	178,547	448,211	2,667,572
1981	118,226	22,801	674,873	56,782	192,832	345,165	168,903	484,236	182,169	457,139	2,703,126
1982	138,019	19,313	680,762	57,846	192,720	351,810	174,577	493,065	191,857	472,369	2,772,338
1983	131,217	21,209	683,532	63,797	187,519	355,744	179,319	490,559	200,653	481,600	2,795,149
1984	137,323	20,407	671,038	70,040	183,153	361,274	184,483	507,082	210,245	489,752	2,834,797
1985	138,441	21,700	668,425	74,085	180,406	366,488	191,249	528,799	217,022	498,414	2,885,029
1986	139,457	20,745	667,256	77,261	185,861	377,092	198,339	566,336	226,552	505,807	2,964,706
1987	141,354	21,054	661,095	81,682	187,684	383,296	209,271	601,553	230,655	512,351	3,029,995
1988	140,801	20,275	700,521	83,221	202,688	391,035	228,695	623,157	240,118	526,532	3,157,043
1989	145,962	19,729	736,640	82,712	212,123	406,652	246,655	649,334	254,810	531,650	3,286,267
1990	147,909	19,869	750,295	85,126	213,303	421,007	258,759	650,613	268,873	540,572	3,356,326
1991	143,938	21,227	738,670	89,068	214,092	419,392	266,592	657,575	277,757	552,102	3,380,413
1992	153,784	20,962	740,283	90,117	214,990	421,570	276,523	656,925	285,641	563,156	3,423,951

**Table 1.3 - Gross Value Added at Producer Prices by Sector of the Economy
Germany, 1950-1992, millions of D-Marks (1985 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Producer Prices
1947											
1948											
1949											
1950	15,842	23,101	94,288	5,316	29,680	33,246	21,234	29,510	45,598	67,685	365,500
1951	18,295	25,796	108,505	6,263	33,092	35,463	23,464	32,390	48,795	70,133	402,196
1952	18,481	26,781	123,118	6,856	36,934	38,096	24,641	36,388	54,400	75,103	440,797
1953	18,625	26,256	137,643	7,181	44,650	41,464	25,682	40,131	60,268	78,768	480,667
1954	19,107	26,624	154,118	8,099	47,570	44,651	27,361	43,938	64,661	82,447	518,576
1955	18,912	29,119	180,749	9,121	55,286	49,876	31,453	48,688	71,250	87,476	581,929
1956	18,811	31,117	195,347	10,113	58,837	55,170	34,296	53,007	77,019	91,830	625,546
1957	19,394	31,179	208,671	10,794	57,822	59,632	35,803	57,054	83,247	99,218	662,814
1958	20,663	29,896	219,825	10,972	59,805	61,641	35,435	61,564	86,247	105,903	691,951
1959	21,390	30,432	240,623	11,831	66,691	67,268	37,923	67,354	91,934	110,081	745,527
1960	22,380	32,930	272,780	13,030	69,780	74,280	40,790	74,120	97,540	114,230	811,860
1961	20,490	32,380	289,120	13,240	72,970	78,130	42,610	78,090	102,120	119,620	848,770
1962	21,980	32,980	302,790	13,890	76,010	82,620	44,170	82,570	105,040	124,470	886,520
1963	22,700	33,020	308,770	14,790	77,750	84,730	45,700	86,410	108,450	129,690	912,010
1964	22,260	31,310	336,160	16,950	87,710	90,930	47,840	92,010	113,750	133,120	972,040
1965	21,180	29,950	361,750	17,400	91,130	96,900	49,780	96,420	121,000	138,420	1,023,930
1966	22,280	29,660	368,000	18,770	94,520	99,280	50,780	102,150	124,740	144,560	1,054,740
1967	24,160	25,990	359,770	19,420	90,560	99,090	50,510	108,750	127,730	148,830	1,054,810
1968	25,660	25,830	397,070	21,090	89,990	103,720	54,800	115,860	130,420	153,010	1,117,450
1969	24,980	25,610	443,490	24,280	91,920	113,710	59,890	121,450	138,310	157,270	1,200,910
1970	25,770	28,610	466,000	26,290	95,790	118,470	64,160	126,660	142,100	165,630	1,259,480
1971	27,030	25,660	470,920	28,090	101,770	123,300	64,480	132,300	148,890	172,770	1,295,210
1972	26,200	23,120	486,250	30,970	108,460	128,180	66,230	143,780	157,210	181,990	1,352,390
1973	28,860	23,640	517,310	34,370	109,250	133,070	70,280	151,070	163,110	190,870	1,421,830
1974	30,250	23,910	512,250	36,530	100,640	131,980	72,280	150,190	168,090	198,770	1,424,890
1975	28,730	19,920	488,080	36,130	94,600	130,500	70,250	162,850	171,800	204,800	1,407,660
1976	27,600	20,150	525,440	40,430	98,760	138,190	75,460	169,660	180,010	208,370	1,484,070
1977	29,180	18,420	535,130	42,540	100,900	144,580	79,440	177,980	189,410	211,910	1,529,490
1978	30,040	17,240	545,330	45,060	102,440	149,860	83,180	186,700	199,170	218,890	1,577,910
1979	28,670	18,800	572,390	47,310	105,260	154,170	89,970	195,700	208,660	226,120	1,647,050
1980	29,310	18,310	561,430	48,570	106,720	153,080	93,970	202,690	217,240	232,180	1,663,500
1981	29,440	17,730	555,850	47,760	102,150	151,090	95,640	208,650	224,580	237,830	1,670,720
1982	34,810	17,580	536,360	46,440	98,270	146,060	96,750	215,840	227,340	240,210	1,659,660
1983	32,100	16,630	543,600	47,400	100,020	148,990	97,780	220,390	236,240	242,150	1,685,300
1984	34,110	16,130	559,520	49,060	100,390	155,750	101,220	224,420	248,110	245,510	1,734,220
1985	31,920	16,050	578,850	50,480	94,810	156,410	105,050	231,870	258,960	249,940	1,774,340
1986	35,250	13,870	587,020	51,960	96,220	159,750	105,090	242,800	271,530	254,580	1,818,070
1987	32,120	13,950	575,590	54,860	94,540	162,330	109,500	251,830	286,780	258,640	1,840,140
1988	34,480	12,900	593,760	55,450	96,430	168,100	117,220	262,350	307,600	262,460	1,910,750
1989	34,970	13,897	614,123	57,389	100,489	175,117	123,073	271,455	325,584	264,573	1,980,670
1990	36,540	12,275	647,787	58,742	103,774	188,917	132,487	282,913	356,015	270,116	2,089,566
1991	34,080	13,645	671,966	62,236	104,123	210,322	138,436	290,120	388,295	276,127	2,189,350
1992	41,390	13,042	653,490	61,984	106,641	210,729	145,040	296,461	414,842	283,281	2,226,900

**Table 1.4 - Gross Value Added at Factor Cost by Sector of the Economy
Italy, 1951-1992, billions of Lire (1985 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade (a)	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services (a)	Government Services	GDP at Factor Cost
1947											
1948											
1949											
1950											
1951	20,540	3,383	21,989	4,750	16,859	24,059	9,064	21,714	22,011	37,580	181,948
1952	20,204	3,804	22,559	5,034	19,729	26,090	9,546	22,497	22,624	38,678	190,764
1953	22,479	4,250	24,265	5,207	22,663	27,606	10,437	23,287	23,333	39,737	203,264
1954	21,239	4,898	26,421	5,426	25,086	29,136	10,751	24,100	23,557	42,414	213,028
1955	22,443	5,705	28,163	5,782	28,086	30,978	12,058	25,300	24,254	43,777	226,546
1956	22,591	6,275	30,309	6,437	29,001	32,853	13,128	26,783	24,592	44,779	236,748
1957	22,996	6,887	32,211	6,888	31,557	35,199	13,852	28,202	25,364	46,465	249,621
1958	25,674	7,196	32,868	7,690	33,922	36,921	14,129	29,482	25,912	48,199	261,992
1959	26,707	7,969	36,473	8,386	36,429	39,549	15,133	31,235	26,708	50,121	278,710
1960	25,723	9,018	40,852	10,047	38,518	43,387	16,837	33,543	27,684	51,581	297,188
1961	28,132	9,954	45,320	11,016	41,645	48,221	18,636	35,811	28,836	53,390	320,960
1962	28,028	11,072	49,794	11,453	45,253	52,071	20,744	38,126	29,397	54,421	340,358
1963	28,789	11,397	53,930	12,160	48,126	57,181	21,129	40,386	30,376	55,624	359,098
1964	30,073	11,398	54,017	13,562	48,362	59,693	21,443	42,475	31,138	57,298	369,458
1965	31,047	12,499	56,360	14,811	45,500	61,385	22,006	44,852	31,813	59,405	379,679
1966	31,860	13,257	61,915	15,850	46,984	65,810	23,231	46,689	34,446	62,188	402,229
1967	33,376	14,936	67,832	17,392	49,458	72,068	24,046	48,499	36,185	63,542	427,334
1968	33,499	16,352	74,053	18,833	54,210	79,547	26,826	50,477	39,681	65,265	458,742
1969	34,694	17,196	79,019	20,425	57,529	87,339	30,021	51,870	41,848	66,440	486,382
1970	35,199	17,934	87,322	21,984	56,378	94,668	31,715	53,542	44,992	67,480	511,214
1971	35,219	18,453	88,683	22,741	54,209	96,815	32,606	57,168	46,587	69,940	522,421
1972	31,983	19,356	93,485	24,001	53,856	99,450	33,065	61,382	48,935	73,063	538,576
1973	34,214	18,525	107,755	26,333	55,807	107,495	35,333	67,233	49,847	75,517	578,059
1974	34,640	17,541	116,848	28,008	57,107	114,034	40,116	68,494	50,121	77,853	604,762
1975	36,018	15,740	111,104	21,800	54,713	113,289	36,477	68,742	50,266	80,092	588,241
1976	34,473	18,720	127,100	22,309	52,662	121,052	38,341	72,506	56,140	82,507	625,810
1977	34,368	19,546	131,674	23,491	52,104	125,746	39,205	74,999	58,455	84,821	644,409
1978	34,891	19,566	138,819	23,654	52,546	130,971	42,105	77,376	63,156	86,891	669,975
1979	36,616	21,117	154,188	23,684	53,634	138,723	48,245	78,964	67,771	88,386	711,328
1980	38,403	22,125	162,570	24,103	55,110	143,627	51,670	79,882	70,635	89,882	738,007
1981	38,178	21,242	159,854	23,668	54,735	144,897	52,995	82,418	72,691	91,065	741,743
1982	37,228	19,875	159,190	23,379	52,922	146,517	54,427	82,291	75,769	92,344	743,942
1983	40,865	19,898	160,548	22,593	53,273	147,674	54,269	83,295	77,888	93,495	753,798
1984	38,759	21,138	167,611	22,758	51,500	152,546	56,360	84,224	84,174	94,736	773,806
1985	39,237	21,602	173,371	22,793	51,527	154,700	59,077	87,764	89,064	96,007	795,142
1986	39,734	21,390	178,253	23,938	51,854	157,806	62,022	92,333	92,494	97,426	817,250
1987	41,466	22,619	185,613	24,594	52,589	164,080	64,291	93,847	95,754	98,845	843,698
1988	40,128	24,624	199,178	24,966	53,952	171,120	69,197	97,546	98,019	100,160	878,890
1989	40,653	25,488	206,795	25,681	55,850	174,736	73,121	101,831	101,495	101,031	906,681
1990	39,328	25,757	211,134	26,611	57,267	178,197	75,750	105,202	105,151	101,821	926,218
1991	42,646	24,500	210,975	26,937	57,992	180,545	77,944	106,638	107,499	102,517	938,193
1992	42,841	25,158	209,170	27,213	57,480	181,283	80,397	113,490	109,775	103,077	949,884

(a) hotels and restaurants are included with wholesale and retail trade.

**Table 1.5 - Gross Value Added at Factor Cost by Sector of the Economy
Netherlands, 1949-1992, millions of Guilders (1985 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Factor Cost
1947											
1948											
1949	4,630		14,116				5,066				103,300
1950	4,731	9,062	14,170	921	7,731	18,987	5,637	12,323	14,984	20,356	108,901
1951	4,983		12,767				6,137				110,432
1952	5,184		13,636				6,565				111,765
1953	5,033		15,781				7,136				119,635
1954	5,234		18,507				7,778				127,927
1955	5,486		19,793				8,420				137,938
1956	5,082		21,428				8,988				143,412
1957	5,428		22,943				9,556				147,049
1958	5,775		22,836				9,461				147,758
1959	5,197		25,306				9,934				155,158
1960	6,699	13,040	29,567	1,292	12,193	24,813	10,975	24,340	15,238	27,915	166,072
1961	6,229	13,178	30,750	1,377	13,337	25,785	11,097	26,062	15,495	28,585	171,895
1962	6,287	13,478	31,815	1,435	14,465	26,886	11,584	27,643	16,044	29,318	178,954
1963	5,876	13,515	33,175	1,545	15,508	28,398	12,194	29,003	16,878	30,204	186,296
1964	6,898	13,045	37,601	1,748	18,462	31,279	13,091	32,053	17,315	30,945	202,437
1965	6,898	12,434	41,378	1,952	19,200	33,337	17,395	37,386	16,200	28,840	215,019
1966	6,728	15,736	42,032	2,195	20,431	33,337	14,167	36,119	19,070	31,465	221,279
1967	7,494	14,500	44,851	2,602	22,400	34,983	14,525	39,285	19,722	31,874	232,236
1968	7,835	16,761	48,129	3,090	24,616	36,218	15,960	41,048	19,903	33,100	246,659
1969	8,090	20,017	52,787	3,537	23,877	38,276	17,036	48,788	16,869	34,734	264,011
1970	8,464	22,712	54,943	3,953	24,770	40,495	18,517	50,976	17,430	36,691	278,950
1971	8,713	26,176	57,668	4,369	25,885	41,049	19,258	52,865	18,779	38,159	292,921
1972	8,961	31,566	59,866	4,994	25,885	41,604	19,505	53,648	19,665	39,626	305,320
1973	9,833	35,415	66,170	5,479	25,885	44,378	19,999	42,668	33,395	41,583	324,805
1974	10,455	38,495	68,642	5,826	24,323	46,597	20,986	47,632	33,238	43,051	339,243
1975	10,331	39,649	61,537	6,034	23,877	47,151	20,739	50,771	34,804	43,051	337,945
1976	10,455	41,959	65,410	6,520	23,431	49,370	21,727	53,642	36,251	45,008	353,772
1977	10,828	41,189	62,404	6,520	23,654	51,589	22,468	57,746	36,953	46,475	359,827
1978	11,589	37,936	64,277	6,891	23,475	53,182	22,966	61,343	38,033	47,558	367,250
1979	12,174	40,130	66,333	6,849	22,129	55,490	24,163	65,257	37,902	48,445	378,873
1980	12,461	37,823	66,665	7,010	22,421	54,940	24,936	67,799	38,619	49,232	381,907
1981	14,205	34,381	66,665	6,989	20,627	52,578	25,984	68,456	39,984	50,168	380,037
1982	15,377	29,388	65,798	7,207	19,573	52,083	25,660	69,186	40,352	50,315	374,939
1983	15,863	31,733	66,917	7,263	18,968	51,919	26,059	71,017	39,962	50,118	379,819
1984	16,834	32,490	70,798	7,347	19,528	54,226	27,804	76,137	37,750	50,168	393,083
1985	16,199	35,251	72,639	7,543	19,663	56,204	28,627	80,640	36,491	50,660	403,917
1986	17,662	32,726	74,415	7,873	20,247	59,183	29,356	84,079	36,638	51,797	413,975
1987	16,889	33,911	75,430	7,983	20,691	59,454	29,980	86,342	37,790	52,554	421,023
1988	17,767	29,859	78,305	8,203	22,722	61,283	30,952	88,989	38,072	53,041	429,192
1989	19,000	30,856	81,856	8,203	23,072	64,465	32,687	94,928	38,450	53,529	447,046
1990	20,902	31,168	84,562	8,456	23,353	67,716	34,699	99,425	39,417	54,124	463,822
1991	21,550	33,880	84,901	8,744	23,119	70,763	37,163	101,700	40,275	54,449	476,542
1992	21,780	34,160	84,309	8,803	22,699	71,169	39,141	102,454	39,970	54,828	479,312

**Table 1.6 - Gross Value Added at Producer Prices by Sector of the Economy
Spain, 1947-1992, billions of Pesetas (1986 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Producer Prices
1947	921	86	596	28	222	980	153	919	749	613	5,266
1948	871	91	581	29	224	980	161	902	753	577	5,169
1949	874	94	561	27	227	976	165	896	765	586	5,171
1950	883	98	615	33	238	1,007	176	921	761	573	5,304
1951	1,093	105	654	39	238	1,075	174	934	796	651	5,760
1952	1,082	114	771	44	244	1,142	198	1,038	824	691	6,148
1953	1,034	116	788	47	265	1,203	221	1,033	839	721	6,269
1954	1,092	118	842	49	318	1,244	220	1,107	887	825	6,702
1955	1,060	122	930	56	357	1,343	229	1,181	905	810	6,993
1956	1,040	129	1,002	64	370	1,360	265	1,271	951	1,035	7,486
1957	1,126	139	1,063	68	386	1,424	289	1,362	993	1,073	7,923
1958	1,105	144	1,135	76	440	1,494	301	1,426	1,038	1,090	8,250
1959	1,165	135	1,146	80	427	1,571	303	1,458	1,058	1,047	8,392
1960	1,172	138	1,180	86	463	1,694	306	1,504	1,132	1,196	8,871
1961	1,242	142	1,392	96	456	1,824	345	1,655	1,175	1,285	9,613
1962	1,222	136	1,566	105	504	1,981	371	1,860	1,206	1,555	10,506
1963	1,438	136	1,655	119	584	2,098	414	2,143	1,323	1,702	11,611
1964	1,312	134	1,831	135	667	2,171	463	2,412	1,369	1,709	12,202
1965	1,240	154	2,111	147	785	2,259	508	2,558	1,455	1,751	12,969
1966	1,310	149	2,395	157	908	2,447	551	2,654	1,548	1,780	13,898
1967	1,362	142	2,640	165	1,062	2,572	622	2,791	1,618	1,803	14,777
1968	1,364	143	2,836	184	1,143	2,697	655	2,951	1,768	1,845	15,586
1969	1,387	179	3,279	215	1,222	2,966	717	3,093	1,964	1,935	16,957
1970	1,375	179	3,607	231	1,297	3,084	793	3,230	2,085	1,985	17,867
1971	1,520	196	3,904	242	1,338	3,189	865	3,395	2,209	2,052	18,912
1972	1,523	205	4,527	272	1,477	3,419	964	3,606	2,334	2,130	20,456
1973	1,580	199	5,095	343	1,740	3,658	1,065	3,849	2,490	2,251	22,270
1974	1,694	219	5,689	388	1,935	3,823	1,163	4,042	2,595	2,419	23,966
1975	1,691	222	5,939	416	1,976	3,868	1,212	4,257	2,725	2,529	24,836
1976	1,765	217	6,384	434	1,986	3,973	1,291	4,437	2,796	2,678	25,960
1977	1,690	229	6,774	467	2,021	4,072	1,384	4,626	2,914	2,802	26,979
1978	1,802	222	7,071	542	2,013	4,186	1,450	4,645	2,993	2,934	27,859
1979	1,729	228	7,250	623	2,017	4,186	1,495	4,792	2,980	3,060	28,360
1980	1,883	251	7,608	596	2,035	4,211	1,525	4,924	2,936	3,163	29,132
1981	1,704	247	7,421	658	2,013	4,127	1,566	4,983	3,011	3,264	28,996
1982	1,678	229	7,552	677	2,067	4,152	1,577	5,059	3,156	3,401	29,548
1983	1,783	219	7,730	678	2,069	4,235	1,618	5,088	3,191	3,525	30,134
1984	1,936	215	7,774	750	1,941	4,324	1,663	5,247	3,265	3,634	30,749
1985	1,997	209	7,918	787	1,985	4,406	1,725	5,355	3,290	3,786	31,458
1986	1,815	246	8,322	859	2,103	4,560	1,755	5,423	3,474	3,941	32,499
1987	2,025	224	8,751	899	2,278	4,756	1,829	5,697	3,685	4,165	34,311
1988	2,092	226	9,128	969	2,509	4,968	1,904	6,017	3,832	4,419	36,063
1989	1,953	251	9,491	956	2,848	5,190	2,016	6,327	4,067	4,725	37,824
1990	2,017	255	9,628	987	3,137	5,319	2,113	6,591	4,153	5,045	39,246
1991	1,979	(a)	10,898	(a)	3,251	(b)	(b)	(b)	15,998	5,290	37,416
1992	1,936	(a)	10,781	(a)	3,109	(b)	(b)	(b)	16,432	5,458	37,716

(a) included with manufacturing

(b) included with community, social and personal services

**Table 1.7 - Gross Value Added at Basic Prices by Sector of the Economy
Sweden, 1951-1992, millions of Kronor (1985 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Basic Values
1947											
1948											
1949											
1950	23,984	1,815	52,971	2,308	22,291	25,983	12,608	42,585	27,119	54,457	266,120
1951	24,570	2,066	56,010	2,544	20,678	25,906	13,458	45,436	28,448	56,861	275,977
1952	25,135	2,326	54,684	2,695	20,722	26,293	13,370	47,473	28,613	59,396	280,706
1953	23,646	2,287	55,750	2,873	23,838	26,968	13,112	49,002	29,210	61,669	288,354
1954	23,999	2,078	58,309	3,265	25,879	29,198	14,010	51,132	30,614	63,527	302,011
1955	22,320	2,397	60,990	3,265	25,330	30,309	14,890	52,814	30,942	64,937	308,193
1956	22,954	2,598	63,760	3,484	25,435	31,914	14,894	54,911	31,495	67,899	319,342
1957	23,973	2,637	67,052	3,659	25,868	32,703	15,368	56,867	31,779	69,527	329,433
1958	23,809	2,535	68,138	3,847	27,482	33,943	15,880	59,171	31,554	72,718	339,077
1959	22,954	2,530	71,222	3,988	28,197	35,908	16,572	61,788	31,659	75,723	350,541
1960	24,137	2,931	77,288	4,349	27,620	36,604	18,508	65,354	32,331	76,936	366,058
1961	24,385	3,217	82,772	4,842	29,295	38,857	18,902	68,091	33,406	79,854	383,621
1962	24,549	3,135	89,216	5,465	32,406	40,261	19,697	70,555	33,765	83,253	402,301
1963	22,764	3,276	93,736	5,688	34,646	42,731	20,375	72,658	35,139	89,515	420,527
1964	24,727	3,737	105,140	6,174	36,644	45,435	21,695	76,186	35,599	92,152	447,488
1965	24,175	4,146	113,143	6,643	39,183	47,464	23,073	79,120	35,943	95,896	468,785
1966	23,145	3,996	118,866	6,708	41,500	48,585	24,314	82,681	36,022	99,465	485,281
1967	25,569	4,264	121,371	7,061	42,416	49,509	24,675	85,634	35,786	105,001	501,285
1968	26,244	4,976	128,940	7,673	41,823	57,772	26,208	87,986	31,664	112,117	525,403
1969	23,840	5,177	137,470	7,965	44,348	60,439	27,021	90,534	32,103	118,106	547,002
1970	25,673	5,365	146,672	8,256	44,486	61,866	28,320	93,064	32,739	126,655	573,096
1971	27,295	5,061	147,916	9,525	44,689	61,342	30,133	97,923	30,717	129,176	583,776
1972	26,268	4,957	148,809	10,795	46,150	64,069	30,757	101,755	31,425	134,167	599,151
1973	26,624	5,567	159,340	11,595	45,869	67,805	33,198	104,634	32,447	138,010	625,089
1974	27,832	5,574	167,952	10,873	42,591	71,616	38,803	106,756	34,207	143,455	649,659
1975	25,279	4,552	168,511	12,058	45,682	71,947	37,216	109,794	36,190	149,232	660,462
1976	25,291	4,424	168,552	12,147	47,674	74,981	38,190	111,908	36,581	153,978	673,724
1977	23,610	3,775	158,891	12,866	47,593	73,158	38,996	114,277	36,554	157,953	667,673
1978	24,022	3,124	154,595	14,225	47,340	72,034	39,806	115,680	35,995	164,306	671,128
1979	23,919	4,063	164,543	14,718	48,273	75,847	41,888	117,364	36,417	170,957	697,989
1980	24,761	4,118	165,183	14,905	48,628	76,345	44,816	120,216	36,535	175,123	710,630
1981	24,772	3,542	160,847	15,935	46,932	74,808	46,250	124,635	37,445	179,358	714,524
1982	26,131	2,915	161,382	15,175	48,800	75,123	47,248	130,385	37,775	182,020	726,954
1983	28,331	2,808	170,760	17,033	47,590	76,763	45,306	134,012	37,954	185,571	746,128
1984	28,939	3,445	183,266	20,613	49,977	79,709	45,887	135,591	38,468	188,849	774,744
1985	28,350	3,688	186,750	22,629	51,136	82,271	47,025	138,745	38,135	190,524	789,253
1986	28,138	3,780	189,001	23,817	52,015	87,112	49,866	142,628	38,742	192,846	807,945
1987	26,638	3,776	193,642	25,164	54,189	92,718	54,224	147,818	40,756	195,102	834,027
1988	26,215	3,619	199,566	25,195	55,049	96,688	58,743	153,223	41,359	196,807	856,464
1989	29,417	3,283	201,892	24,200	59,286	100,335	59,986	156,869	42,178	201,037	878,483
1990	30,874	3,404	200,579	24,705	59,486	101,254	68,785	160,167	41,291	205,283	895,828
1991	28,080	3,259	189,405	24,929	59,359	100,558	67,754	163,838	40,913	206,280	884,375
1992	28,015	3,337	187,948	24,511	58,964	98,334	67,604	163,068	40,475	201,590	873,846

**Table 1.8 - Gross Value Added at Factor Cost by Sector of the Economy
United Kingdom, 1947-1992, millions of Pounds (1985 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Factor Cost
1947	2,068	8,396	33,888	1,814	10,522	19,234	8,884	17,630	7,060	34,272	143,768
1948	2,224	8,901	36,962	1,928	11,468	19,981	9,556	17,765	7,171	31,517	147,473
1949	2,390	9,196	39,316	2,062	11,993	21,289	9,784	18,035	6,840	31,268	152,172
1950	2,447	9,295	42,020	2,248	12,008	22,222	10,006	18,370	6,729	31,152	156,498
1951	2,502	9,603	43,810	2,389	11,553	21,849	10,455	18,426	6,729	32,487	159,802
1952	2,558	9,738	42,234	2,462	11,898	21,289	10,569	18,426	6,619	33,286	159,079
1953	2,613	9,689	44,841	2,585	12,729	22,596	10,791	18,863	6,729	33,764	165,200
1954	2,668	9,812	47,856	2,796	13,230	23,903	10,905	19,491	6,840	33,837	171,337
1955	2,640	9,701	50,910	2,946	13,260	24,837	11,132	20,008	6,950	33,457	175,841
1956	2,781	9,726	50,657	3,083	13,995	25,210	11,355	20,324	6,950	33,769	177,850
1957	2,836	9,664	51,786	3,192	13,950	25,770	11,355	20,896	7,060	33,735	180,245
1958	2,781	9,246	51,124	3,336	13,885	26,144	11,241	21,468	7,171	33,380	179,775
1959	2,890	8,999	54,198	3,423	14,661	27,824	11,690	22,543	7,502	33,346	187,077
1960	3,086	8,679	58,594	3,686	15,482	28,758	12,368	23,362	7,832	33,395	195,243
1961	3,086	8,556	58,692	3,856	16,588	29,692	12,590	23,934	8,053	34,053	199,100
1962	3,197	8,790	58,945	4,163	16,759	29,692	12,703	24,339	8,274	34,579	201,441
1963	3,306	8,778	61,357	4,437	16,799	30,626	13,153	25,158	8,494	35,271	207,378
1964	3,501	8,802	66,201	4,584	18,786	31,746	13,939	26,121	9,046	35,881	218,606
1965	3,588	8,482	68,399	4,847	19,171	32,493	14,502	26,795	9,156	36,753	224,187
1966	3,588	7,997	69,648	5,035	19,494	32,842	15,014	27,575	9,469	37,480	228,142
1967	3,706	7,941	70,117	5,217	20,240	33,192	15,184	29,557	9,569	38,876	233,599
1968	3,706	7,726	74,724	5,557	20,844	34,240	15,696	29,954	9,672	39,282	241,402
1969	3,746	7,276	77,613	5,836	20,562	34,240	16,379	31,115	9,748	38,962	245,475
1970	3,943	6,936	78,081	6,067	20,159	34,939	17,061	32,334	10,933	46,518	256,970
1971	4,179	6,915	77,769	6,303	20,744	35,288	17,232	33,934	9,948	40,967	253,279
1972	4,258	5,826	79,643	6,746	21,207	37,035	18,085	35,344	10,111	42,566	260,821
1973	4,376	6,492	86,124	7,146	21,671	39,481	18,767	37,268	10,511	43,903	275,739
1974	4,429	5,294	85,095	7,139	19,427	38,187	18,805	38,220	10,602	44,812	272,010
1975	4,086	5,902	79,158	7,248	18,396	36,967	18,674	38,784	10,933	46,667	266,815
1976	3,759	7,442	80,741	7,415	18,139	37,263	18,506	39,948	11,690	48,534	273,435
1977	4,233	11,119	82,245	7,712	18,065	36,782	19,029	40,724	11,802	48,522	280,232
1978	4,577	13,757	82,641	7,951	19,298	38,667	19,533	42,133	12,121	48,737	289,414
1979	4,507	17,389	82,490	8,300	19,426	39,811	20,483	44,564	12,382	49,293	298,645
1980	5,002	17,456	75,333	8,122	18,361	36,896	20,220	46,232	13,033	49,790	290,447
1981	5,122	18,488	70,813	8,081	16,507	36,158	20,018	47,899	12,772	50,068	285,927
1982	5,552	20,151	70,964	8,000	16,819	36,860	19,897	50,632	12,642	49,905	291,421
1983	5,322	21,474	72,998	8,178	17,498	38,040	20,605	53,042	13,033	50,183	300,373
1984	6,431	20,251	75,800	6,933	18,326	39,911	21,617	56,191	13,912	50,183	309,555
1985	6,096	22,222	77,823	8,414	18,400	41,574	22,494	58,914	14,644	50,458	321,039
1986	6,102	22,930	78,835	9,247	19,154	43,861	23,461	63,608	15,376	50,733	333,307
1987	5,913	22,368	82,959	9,499	20,774	46,771	25,306	68,302	16,548	51,558	349,997
1988	5,822	20,922	88,796	9,575	23,110	49,930	26,858	72,731	17,280	52,153	367,178
1989	6,112	17,684	92,778	9,536	24,437	51,922	28,232	74,111	17,211	52,562	374,585
1990	6,321	16,955	92,592	9,801	25,038	51,546	28,505	75,977	17,297	52,781	376,813
1991	6,435	17,311	87,592	10,349	23,010	49,592	27,968	75,482	17,436	53,111	368,286
1992	6,751	18,057	87,037	10,349	22,084	49,496	28,474	73,897	17,782	53,279	367,205

**Table 1.9 - Gross Value Added at Market Prices by Sector of the Economy
United States, 1947-1990, millions of US Dollars (1982 prices)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	GDP at Market Prices
1947	56,907	77,942	233,010	14,376	73,020	142,782	73,010	103,054	128,271	156,230	1,058,602
1948	62,712	83,457	245,823	16,347	85,610	146,544	72,093	107,767	132,662	155,564	1,108,579
1949	62,442	75,783	233,237	18,118	85,050	150,317	66,260	112,299	132,693	164,020	1,100,219
1950	65,815	83,924	265,611	19,702	95,200	164,765	69,631	119,762	137,645	169,254	1,191,309
1951	64,035	93,173	297,234	22,819	105,557	166,282	76,613	126,476	140,850	214,091	1,307,131
1952	65,728	93,911	307,358	24,509	110,325	171,493	76,306	134,761	143,373	231,994	1,359,759
1953	67,846	97,244	329,720	26,426	114,112	177,044	77,905	142,293	146,836	230,996	1,410,422
1954	69,753	96,065	305,643	29,068	118,740	178,393	73,633	149,601	150,083	225,470	1,396,449
1955	70,690	106,031	337,718	30,440	126,814	194,585	80,101	160,233	157,454	223,482	1,487,547
1956	69,396	111,219	340,753	32,828	135,803	200,433	83,291	168,879	165,768	225,649	1,534,021
1957	67,454	110,931	342,660	35,031	135,529	203,723	83,687	178,389	173,464	229,244	1,560,113
1958	69,879	102,780	312,763	36,534	140,380	203,612	79,048	184,549	179,290	230,164	1,538,999
1959	67,311	108,441	348,347	40,029	152,654	217,859	83,246	196,034	188,815	232,815	1,635,551
1960	69,841	108,606	349,040	42,969	155,244	222,061	85,036	206,584	195,635	240,386	1,675,403
1961	69,088	110,220	349,808	45,179	157,076	224,236	85,383	215,109	203,392	249,287	1,708,777
1962	68,673	113,139	379,543	47,490	164,185	238,852	89,414	226,581	213,650	258,476	1,800,003
1963	68,802	117,879	409,600	49,953	168,896	247,879	94,496	235,976	223,714	264,615	1,881,808
1964	66,717	121,824	438,488	53,387	176,926	263,053	97,964	245,920	237,373	274,095	1,975,747
1965	68,203	126,088	476,680	55,831	184,336	280,412	106,279	259,894	247,335	284,333	2,089,391
1966	63,893	132,589	513,182	59,296	185,032	295,526	115,339	271,263	261,201	305,571	2,202,893
1967	66,972	138,589	511,791	62,197	181,447	303,511	116,738	282,515	272,843	322,359	2,258,963
1968	65,030	143,728	538,032	68,162	180,969	321,084	122,717	296,181	282,578	332,685	2,351,166
1969	66,785	148,663	553,109	72,537	174,710	327,388	129,347	314,189	296,048	340,302	2,423,078
1970	70,449	155,125	522,302	74,437	159,841	332,696	131,270	320,854	304,227	339,694	2,410,894
1971	72,261	152,628	531,262	79,678	154,873	349,078	132,780	336,061	311,120	340,094	2,459,834
1972	72,502	154,967	578,427	82,108	158,599	375,415	143,776	351,068	329,228	340,594	2,586,684
1973	71,934	153,756	640,296	92,619	162,124	395,507	153,544	367,876	350,010	343,495	2,731,161
1974	71,371	150,221	609,719	95,165	154,441	385,732	156,946	381,783	357,521	350,697	2,713,596
1975	74,809	144,790	564,273	99,712	142,209	391,977	151,395	387,786	362,562	355,098	2,674,610
1976	73,163	143,375	618,995	98,710	150,449	411,255	161,972	403,293	378,303	357,799	2,797,313
1977	73,300	145,500	664,800	99,400	157,100	433,700	171,800	417,900	399,600	363,000	2,926,100
1978	73,000	148,300	694,700	97,800	166,900	466,600	186,200	442,800	421,500	371,600	3,069,400
1979	77,000	142,200	712,200	95,000	167,400	488,000	196,400	461,100	436,900	376,500	3,152,700
1980	76,400	143,500	673,900	97,300	153,300	481,800	196,600	468,900	450,900	382,800	3,125,400
1981	87,400	145,700	678,600	99,300	150,300	499,100	194,600	476,100	463,000	385,400	3,179,500
1982	89,596	132,122	634,648	92,049	140,908	506,484	196,392	475,139	463,633	383,922	3,114,893
1983	76,700	129,900	674,200	92,100	146,100	530,000	215,700	492,900	480,400	387,300	3,225,300
1984	84,200	137,900	752,400	104,300	159,400	588,900	221,800	509,800	509,700	391,900	3,460,300
1985	95,800	139,000	779,200	109,200	166,300	621,500	222,200	528,300	538,600	400,500	3,600,600
1986	103,600	128,200	803,400	111,900	174,600	662,200	230,500	535,600	565,800	407,900	3,723,700
1987	105,100	127,500	852,200	119,400	177,500	655,900	251,900	560,600	592,600	415,600	3,858,300
1988	101,062	144,705	896,567	125,135	176,417	687,687	261,426	586,079	615,547	423,679	4,018,303
1989	104,506	127,961	905,013	130,612	177,583	711,813	266,818	599,233	640,462	432,139	4,096,142
1990	113,769	141,018	901,421	130,869	175,167	702,303	278,321	601,172	658,411	443,190	4,145,642
1991											
1992											

Number of Persons Employed by Industry
(FIGURES WITHIN LINED AREAS ARE ESTIMATED AS DESCRIBED IN THE NOTES)

Denmark

Notes:

Before 1975 data on armed forces are not available. 1948-1975: finance, insurance and real estate was obtained on the basis of the assumption that its productivity movement equalled that of transport and communication and wholesale and retail trade; community, personal and social services was obtained on the basis of the assumption that its productivity movement equalled that of government services. The combined employment of finance, insurance and real estate and community, personal and social services was obtained as a residual from total employment minus the employment of the other sectors.

Sources:

1948-75 from the data base of the ADAM Macroeconomic Model, which was kindly provided by Danmarks Statistik. The self-employed in non-agriculture were distributed over the industries on the basis of the ratio of self-employed to employees in 1975 from Danmarks Statistik, *Nationalregnskabsstatistik 1982*. 1975-90 from Danmarks Statistik, *Nationalregnskabsstatistik 1982, 1987 and 1993*, Copenhagen.

France

Notes:

1950-1964: finance, insurance and real estate was obtained on the basis of the assumption that its productivity movement equalled that of transport and communication and wholesale and retail trade. 1950-1970: community, personal and social services and government services were obtained on the basis of the assumption that their productivity movement equalled that of the two sectors taken together. The combined employment of finance, insurance and real estate, community, personal and social services and government services was obtained as a residual from total employment minus the employment of the other sectors.

Sources:

1950 from Maddison (1996) distributed over the industries on the basis of 1954 shares from OECD, *Manpower Statistics 1950-1962*, and linked to the 1954. 1954-56 from OECD, *Manpower Statistics 1950-1962*. 1956-65 from OECD, *Labour Force Statistics 1956-1966*. 1965-69 from OECD, *Labour Force Statistics 1965-1985* and 1970-71 from OECD, *Labour Force Statistics 1970-1990*. 1971-1979 from OECD, *National Accounts, Detailed Tables, Volume II, 1971-83*; 1979-90 from OECD, *National Accounts, Detailed Tables, Volume II, 1980-92*.

Germany

Notes:

1950-1959: wholesale and retail trade and finance, insurance and real estate were obtained on the basis of the assumption that their productivity movement equalled that of the two sectors taken together. The combined employment of the two sectors was obtained as a residual from total employment minus the employment of the other sectors.

Sources:

1950-87 "Erwerbstätige" from *Volkswirtschaftliche Gesamtrechnungen, Revidierte Ergebnisse 1950-1990*, Fachserie 18, Reihe S.15, p. 88 and pp. 117-120. 1987-92 from *Volkswirtschaftliche Gesamtrechnungen, Hauptbericht 1993* Fachserie 18. From 1950-59 disaggregated to industries on the basis of W.G. Hoffmann, *Das Wachstum der Deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts*, Springer Verlag, 1965. 1960-69 disaggregated to industries on the basis of Institut für Arbeitsmarkt und Berufsforschung, *Arbeitszeit und Arbeitsvolumen in der Bundesrepublik Deutschland 1960-1986*, Nürnberg.

Italy

Source:

See notes on gross value added in constant prices.

Netherlands

Notes:

The figures on employment published in the Dutch national accounts are for "man-years". It appeared not possible to rework these estimates to the number of persons. However, the man-year estimates were used to divide the estimates of persons employed up into sectors where independent estimates were not available, which was for the government sector for the whole period, and for all sectors except agriculture and manufacturing before 1973.

Sources:

1987-1992 from CBS, *Arbeidsrekeningen 1989-1992*. 1977-87: adjusted series (provided by CBS) for employees based on the *Statistiek Werkzame Personen*. Includes adjustments for changes in definitions and for persons working less than 15 hours per week. Armed forces from OECD, *Labour Force Statistics*, various issues. 1973-77 from *Statistiek Werkzame Personen*, but adjusted for persons working less than 15 hours per week derived from the *Arbeidskrachtentelling 1973, 1975 and 1977* and with intermediate years interpolated. 1973-87: self-employed from CBS, *Volkstelling 1971* and *Arbeidskrachtentelling*, various issues, and with intermediate years interpolated. 1950-1973: total economy supplied by US Department of Labor. Manufacturing from US Department of Labor, "International Comparisons of Manufacturing Productivity and Unit Labor Cost Trends, 1991", USDL:92-752, Washington D.C.. Agriculture from C.L.J. van der Meer, "Employment and Labour Input in Dutch Agriculture 1849-1986", *Research Memorandum no. 259*, University of Groningen.

Spain

Notes:

1950-1969: finance, insurance and real estate was obtained on the basis of the assumption that its productivity movement equalled that of transport and communication and wholesale and retail trade. 1950-1979: community, personal and social services and government services were obtained on the basis of the assumption that their productivity movement equalled that of the two sectors taken together. The combined employment of finance, insurance and real estate, community, personal and social services and government services was obtained as a residual from total employment minus the employment of the other sectors.

Sources:

1950 from OECD, *Manpower Statistics 1950-1962*. 1956-63 from OECD, *Labour Force Statistics 1956-1966*. 1963-70 except industry from OECD, *Labour Force Statistics 1959-1970* and 1970-71 except industry from OECD, *Labour Force Statistics 1970-1990*. 1971-1980 except industry from OECD, *National Accounts, Detailed Tables, Volume II, 1971-83* with services split off on the basis of shares from OECD, *Labour Force Statistics 1965-1985*. 1964-1981 industry from R. Gandoy Juste (1988), *Evolucion de la productividad global en la industria Española. Un analisis desagregado para el periodo 1964-1981*, Editorial de la Universidad Complutense de Madrid. 1980-85 from OECD, *National Accounts, Detailed Tables, Volume II, 1975-87* and 1985-89 from OECD, *National Accounts, Detailed Tables, Volume II, 1978-90*. 1990-92 from updated provided by OECD.

Sweden

Notes:

1950-1960: wholesale and retail trade and finance, insurance and real estate were obtained on the basis of the assumption that their productivity movement equalled that of the two sectors taken together. 1950-1960: community, personal and social services and government services were obtained on the basis of the assumption that their productivity movement equalled that of the two sectors taken together. The combined employment of wholesale and retail trade and finance, insurance and real estate, community, personal and social services and government services was obtained as a residual from total employment minus the employment of the other sectors.

Sources:

1950 from B.R. Mitchell, *International Historical Statistics Europe, 1750-1988*, 1992. 1960-69 obtained as index series from SCB (1972), *Sysselsättning 1960-1971* (Employment), Supplement II SM N 1972:93 National Accounts, including correction for break in series in 1968. 1970-85 from SCB (1986), *Nationalräkenskaper 1970-1985*, Appendix 5. 1985-90 from SCB (1991), *Nationalräkenskaper 1970-1990*, Appendix 5. 1990-92 provided by OECD.

United Kingdom

Sources:

1947-65 index series from C.H. Feinstein, *Statistical Tables of National Income, Expenditure and Output of the United Kingdom 1855-1965*. 1965-74 from OECD, *National Accounts of OECD Countries 1950-78, volume I*. For 1965-74 employment shares for services sectors were obtained from *OECD Labour Force Statistics 1965-85*. 1975-1991 from OECD, *National Accounts, Detailed Tables, Volume II, 1971-83* and OECD, *National Accounts, Detailed Tables, Volume II, 1980-92*.

United States:

Notes:

Number of persons employed is calculated as full time and part time employees plus self-employed.

Sources:

1982-1990 from BEA, *Survey of Current Business*, various issues; 1947-1982 from BEA, *National Income and Product Accounts of the United States, 1929-1982*, Washington DC, 1986.

**Table 2.1 - Number of Persons Employed
Denmark, 1948-92 (thousands)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	Total Employment
1947											
1948	534.4	21.0	437.3	10.7	130.5	257.3	131.9	85.6	143.4	192.1	1,944.1
1949	527.1	20.0	447.4	10.7	135.6	257.4	134.0	84.9	144.8	194.2	1,956.1
1950	519.9	19.1	472.2	11.0	141.0	269.6	135.3	83.2	146.1	195.8	1,993.1
1951	512.8	18.1	479.3	11.1	137.8	273.7	136.4	81.2	148.2	217.6	2,016.3
1952	501.9	17.1	461.8	11.2	142.7	279.0	130.2	83.0	145.9	224.5	1,997.3
1953	497.1	16.2	468.5	11.1	156.3	275.2	138.5	81.4	147.9	249.2	2,041.6
1954	488.5	15.2	485.0	11.3	161.4	289.5	140.0	85.5	142.9	240.1	2,059.4
1955	480.1	14.3	478.8	11.2	152.5	294.6	142.6	85.6	145.3	248.5	2,053.3
1956	468.7	13.2	475.2	11.1	154.9	284.0	152.9	86.4	146.8	248.8	2,042.1
1957	457.1	12.2	491.1	11.2	153.4	284.2	151.5	87.7	148.0	250.0	2,046.3
1958	446.0	11.3	487.6	11.2	153.7	289.4	151.2	84.3	154.1	264.3	2,053.1
1959	436.8	10.3	522.2	11.2	168.4	294.0	152.5	87.8	152.9	257.0	2,093.1
1960	424.4	9.4	550.5	11.2	174.6	301.3	155.3	87.5	154.9	263.3	2,132.3
1961	412.5	8.6	562.6	11.4	181.3	307.1	155.8	83.9	161.8	286.7	2,171.7
1962	399.2	7.8	575.4	11.6	185.9	308.5	158.9	91.5	164.0	302.8	2,205.5
1963	384.0	7.0	572.8	11.7	186.3	316.7	161.0	94.9	166.3	307.5	2,208.1
1964	371.7	6.3	579.8	11.9	205.4	320.1	161.3	98.6	172.9	321.7	2,249.6
1965	357.2	5.4	586.7	12.1	210.0	341.3	159.3	101.7	169.8	339.8	2,283.3
1966	337.7	5.6	581.4	12.7	204.6	322.6	149.0	102.9	175.0	372.7	2,264.1
1967	317.4	4.8	554.3	12.8	221.9	300.3	145.5	105.6	177.1	405.2	2,244.8
1968	297.9	4.0	557.7	12.9	218.3	295.7	150.8	115.7	178.1	413.6	2,244.7
1969	277.5	3.3	569.2	13.0	227.9	330.6	156.6	119.7	165.0	445.6	2,308.3
1970	258.2	2.5	569.4	13.1	233.1	344.7	159.3	127.7	158.1	466.6	2,332.6
1971	246.4	0.2	547.2	13.3	231.0	340.1	157.2	132.7	168.3	520.6	2,357.0
1972	230.0	2.4	559.1	13.6	222.1	329.0	157.2	145.9	173.6	531.5	2,364.3
1973	227.8	2.1	566.9	13.7	223.2	338.3	166.8	151.4	168.2	540.1	2,398.7
1974	223.7	2.1	546.7	13.9	205.7	325.4	170.5	151.5	175.4	587.0	2,401.9
1975	224.0	2.0	504.0	14.0	191.0	321.0	159.0	158.0	178.0	586.0	2,337.0
1976	218.0	2.0	505.0	15.0	203.0	327.0	164.0	160.0	183.0	603.0	2,380.0
1977	214.0	2.0	503.0	15.0	199.0	325.0	166.0	165.0	182.0	628.0	2,399.0
1978	206.0	2.0	500.0	15.0	203.0	312.0	165.0	175.0	190.0	655.0	2,423.0
1979	201.0	2.0	499.0	15.0	201.0	308.0	168.0	186.0	184.0	690.0	2,454.0
1980	192.0	2.0	490.0	15.0	189.0	294.0	169.0	193.0	178.0	720.0	2,442.0
1981	186.0	2.0	472.0	15.0	165.0	281.0	170.0	196.0	176.0	747.0	2,410.0
1982	185.0	2.0	470.0	15.0	154.0	278.0	171.0	197.0	176.0	773.0	2,421.0
1983	183.0	2.0	471.0	16.0	152.0	276.0	172.0	200.0	177.0	779.0	2,428.0
1984	179.0	2.0	495.0	16.0	163.0	278.0	173.0	210.0	181.0	773.0	2,470.0
1985	175.0	2.0	523.0	16.0	169.0	284.0	176.0	223.0	185.0	778.0	2,531.0
1986	169.0	3.0	542.0	16.0	186.0	290.0	179.0	237.0	190.0	785.0	2,597.0
1987	163.0	3.0	535.0	17.0	191.0	287.0	184.0	253.0	198.0	791.0	2,622.0
1988	155.0	2.0	523.0	16.0	186.0	287.0	188.0	260.0	194.0	793.0	2,604.0
1989	148.0	2.0	517.0	17.0	175.0	284.0	184.0	262.0	194.0	807.0	2,590.0
1990	141.0	2.0	517.0	17.0	168.0	279.0	182.0	258.0	193.0	808.0	2,565.0
1991	134.0	2.0	509.0	17.0	159.0	273.0	178.0	255.0	190.0	804.0	2,521.0
1992	130.0	2.0	503.0	17.0	159.0	273.0	176.0	253.0	192.0	811.0	2,516.0

**Table 2.2 - Number of Persons Employed
France, 1950-1992 (thousands)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	Total Employment
1947											
1948											
1949											
1950	4,800.2	414.1	4,937.2	99.5	1,482.6	2,088.6	872.0	858.1	798.4	3,603.6	19,954.4
1951											
1952											
1953											
1954	4,808.9	414.8	4,946.1	99.7	1,485.3	2,092.4	873.6	811.2	853.0	3,605.4	19,990.4
1955	4,599.0	402.1	4,986.7	103.6	1,556.8	2,132.5	874.5	795.9	900.4	3,656.7	20,008.3
1956	4,808.9	414.8	4,946.1	99.7	1,485.3	2,092.4	873.6	740.1	904.4	3,625.1	19,990.4
1957	4,588.9	418.2	5,075.1	102.2	1,540.7	2,151.1	887.7	761.6	960.2	3,646.5	20,132.3
1958	4,413.4	414.8	5,119.7	106.1	1,532.7	2,202.6	899.2	849.6	954.7	3,558.0	20,050.7
1959	4,295.5	408.0	5,045.0	109.2	1,538.7	2,225.2	905.3	860.5	939.0	3,564.0	19,890.5
1960	4,147.8	391.0	5,063.4	112.4	1,557.9	2,268.6	915.9	849.7	983.7	3,602.0	19,892.4
1961	4,000.1	369.5	5,109.0	114.3	1,591.1	2,311.0	929.1	848.3	1,012.5	3,600.1	19,885.2
1962	3,854.4	359.3	5,174.9	117.5	1,639.5	2,359.8	945.0	799.8	1,040.4	3,618.3	19,909.0
1963	3,713.5	351.3	5,294.9	119.9	1,734.8	2,416.6	974.4	836.8	1,056.7	3,602.2	20,101.1
1964	3,576.5	339.8	5,401.0	121.5	1,846.9	2,464.7	1,000.4	860.1	1,079.2	3,633.0	20,323.1
1965	3,442.5	329.5	5,358.3	123.9	1,933.9	2,509.3	1,016.8	910.4	1,107.6	3,677.3	20,409.5
1966	3,314.6	321.1	5,386.3	125.5	1,978.1	2,553.3	1,024.8	959.8	1,177.5	3,736.7	20,577.7
1967	3,191.7	308.0	5,355.3	127.9	2,000.2	2,603.4	1,035.4	1,017.2	1,183.7	3,830.4	20,653.2
1968	3,044.0	291.3	5,279.6	129.6	2,023.3	2,632.4	1,038.9	1,074.6	1,148.1	3,965.8	20,627.6
1969	2,876.5	275.7	5,429.1	131.2	2,078.1	2,694.8	1,054.8	1,155.0	1,194.6	4,057.7	20,947.6
1970	2,726.8	260.2	5,577.7	131.2	2,106.5	2,744.9	1,065.4	1,228.5	1,244.2	4,169.3	21,254.7
1971	2,589.1	249.5	5,660.5	130.4	2,088.6	2,770.4	1,068.9	1,283.6	1,279.8	4,251.7	21,372.4
1972	2,440.9	236.5	5,730.4	130.4	2,082.3	2,785.1	1,079.0	1,330.5	1,326.6	4,321.1	21,462.6
1973	2,311.6	222.3	5,855.7	131.9	2,103.4	2,950.6	1,096.1	1,341.3	1,337.4	4,402.8	21,753.1
1974	2,204.1	212.8	5,918.3	135.0	2,092.9	2,995.7	1,125.2	1,382.7	1,378.7	4,451.6	21,897.0
1975	2,115.6	205.7	5,756.0	136.6	2,001.8	2,968.6	1,126.2	1,412.3	1,408.2	4,524.7	21,655.9
1976	2,050.0	195.1	5,698.5	137.4	1,985.9	3,023.7	1,132.5	1,457.1	1,492.1	4,601.5	21,773.7
1977	1,989.3	184.4	5,673.9	138.9	1,979.5	3,056.8	1,156.5	1,513.0	1,562.2	4,658.8	21,913.3
1978	1,942.5	176.2	5,583.5	143.6	1,938.2	3,081.0	1,178.8	1,580.1	1,617.1	4,738.0	21,979.1
1979	1,904.7	169.1	5,485.9	144.4	1,919.2	3,088.8	1,185.0	1,633.8	1,655.8	4,746.6	21,933.1
1980	1,849.7	164.7	5,405.7	147.0	1,913.1	3,102.8	1,188.0	1,700.8	1,669.1	4,801.0	21,941.9
1981	1,781.4	161.0	5,232.2	150.2	1,878.3	3,108.6	1,197.1	1,739.6	1,707.3	4,880.5	21,836.2
1982	1,717.3	160.8	5,150.0	156.5	1,831.6	3,128.3	1,221.5	1,765.1	1,769.7	4,995.1	21,895.9
1983	1,659.9	157.7	5,048.6	164.0	1,752.6	3,143.5	1,240.0	1,779.4	1,807.0	5,112.5	21,865.2
1984	1,604.2	152.3	4,904.3	165.7	1,639.8	3,100.5	1,248.0	1,819.8	1,844.0	5,194.3	21,672.9
1985	1,547.1	143.6	4,773.5	164.9	1,579.4	3,043.9	1,247.2	1,877.0	1,867.7	5,363.8	21,608.1
1986	1,496.0	137.2	4,687.1	165.1	1,577.2	3,042.9	1,251.1	1,934.0	1,925.8	5,477.1	21,693.5
1987	1,438.5	130.8	4,569.9	164.7	1,588.4	3,089.9	1,256.1	2,015.8	1,991.1	5,518.1	21,763.3
1988	1,382.1	123.7	4,504.0	164.6	1,612.3	3,133.3	1,268.0	2,141.7	2,061.5	5,565.9	21,957.1
1989	1,322.7	118.9	4,528.1	163.4	1,649.5	3,168.1	1,274.9	2,294.2	2,134.6	5,591.9	22,246.3
1990	1,262.0	113.3	4,557.2	161.9	1,662.2	3,198.7	1,292.0	2,405.1	2,203.8	5,620.7	22,476.9
1991	1,206.0	108.3	4,482.8	160.9	1,651.3	3,177.8	1,304.0	2,439.7	2,234.2	5,718.5	22,483.5
1992	1,151.9	104.7	4,366.8	160.0	1,606.9	3,148.9	1,314.6	2,415.5	2,286.5	5,820.4	22,376.2

**Table 2.3 - Number of Persons Employed
Germany, 1950-92 (thousands)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	Total Employment
1947											
1948											
1949											
1950	4,873.4	599.2	6,661.9	151.4	1,516.7	2,089.8	969.4	215.8	1,398.3	2,147.8	20,623.7
1951	4,693.4	618.5	7,061.9	155.4	1,618.1	2,240.1	991.9	238.0	1,397.1	2,173.7	21,188.2
1952	4,553.9	651.8	7,224.5	164.0	1,704.2	2,374.9	1,023.8	263.9	1,439.4	2,255.7	21,656.1
1953	4,427.5	667.5	7,485.1	166.6	1,822.3	2,535.5	1,047.4	285.5	1,489.9	2,324.8	22,252.1
1954	4,307.1	661.1	7,794.5	170.5	1,958.2	2,672.3	1,079.7	306.0	1,545.0	2,401.4	22,895.8
1955	4,205.0	659.4	8,358.2	171.8	2,096.3	2,851.6	1,114.1	323.9	1,580.2	2,424.0	23,784.5
1956	4,096.8	672.0	8,711.2	178.4	2,186.1	3,021.4	1,159.1	337.8	1,629.1	2,496.3	24,488.0
1957	4,037.1	683.9	8,974.5	181.6	2,144.0	3,210.2	1,160.2	357.3	1,646.8	2,607.4	25,003.0
1958	3,919.8	666.5	8,988.4	182.5	2,190.2	3,332.0	1,209.0	387.2	1,725.4	2,689.4	25,290.3
1959	3,766.1	610.5	9,049.2	184.2	2,299.7	3,433.7	1,229.7	400.0	1,821.4	2,800.5	25,595.0
1960	3,581.0	616.0	9,624.0	131.0	2,126.0	3,299.0	1,460.0	383.0	1,981.0	2,862.0	26,063.0
1961	3,449.0	586.0	9,905.0	136.0	2,178.0	3,344.0	1,464.0	411.0	1,995.0	2,958.0	26,426.0
1962	3,307.0	550.0	9,948.0	148.0	2,272.0	3,348.0	1,464.0	432.0	2,027.0	3,022.0	26,518.0
1963	3,144.0	517.0	9,883.0	148.0	2,379.0	3,376.0	1,469.0	452.0	2,089.0	3,124.0	26,581.0
1964	3,002.0	497.0	9,885.0	157.0	2,447.0	3,344.0	1,473.0	466.0	2,124.0	3,209.0	26,604.0
1965	2,876.0	474.0	10,059.0	171.0	2,454.0	3,327.0	1,464.0	485.0	2,167.0	3,278.0	26,755.0
1966	2,790.0	435.0	9,953.0	193.0	2,436.0	3,359.0	1,441.0	513.0	2,206.0	3,347.0	26,673.0
1967	2,638.0	378.0	9,418.0	204.0	2,249.0	3,292.0	1,417.0	536.0	2,238.0	3,434.0	25,804.0
1968	2,523.0	337.0	9,488.0	210.0	2,285.0	3,300.0	1,392.0	554.0	2,283.0	3,454.0	25,826.0
1969	2,395.0	318.0	9,883.0	221.0	2,305.0	3,330.0	1,384.0	573.0	2,310.0	3,509.0	26,228.0
1970	2,262.0	310.0	10,117.0	241.0	2,319.0	3,348.0	1,407.0	597.0	2,336.0	3,623.0	26,560.0
1971	2,128.0	305.0	10,051.0	245.0	2,350.0	3,332.0	1,437.0	633.0	2,406.0	3,781.0	26,668.0
1972	2,034.0	282.0	9,862.0	249.0	2,360.0	3,399.0	1,473.0	663.0	2,469.0	3,983.0	26,774.0
1973	1,946.0	260.0	9,926.0	254.0	2,368.0	3,455.0	1,495.0	687.0	2,546.0	4,129.0	27,066.0
1974	1,845.0	251.0	9,690.0	257.0	2,201.0	3,418.0	1,500.0	704.0	2,637.0	4,235.0	26,738.0
1975	1,749.0	251.0	9,097.0	252.0	2,024.0	3,369.0	1,503.0	703.0	2,721.0	4,351.0	26,020.0
1976	1,617.0	244.0	8,892.0	253.0	2,016.0	3,387.0	1,500.0	711.0	2,817.0	4,445.0	25,882.0
1977	1,534.0	242.0	8,927.0	255.0	1,997.0	3,379.0	1,499.0	712.0	2,867.0	4,507.0	25,919.0
1978	1,493.0	235.0	8,906.0	255.0	2,013.0	3,412.0	1,500.0	722.0	2,970.0	4,624.0	26,130.0
1979	1,410.0	227.0	9,011.0	259.0	2,083.0	3,470.0	1,511.0	739.0	3,101.0	4,757.0	26,568.0
1980	1,403.0	230.0	9,094.0	263.0	2,134.0	3,512.0	1,520.0	755.0	3,215.0	4,854.0	26,980.0
1981	1,368.0	234.0	8,930.0	266.0	2,098.0	3,508.0	1,525.0	767.0	3,313.0	4,942.0	26,951.0
1982	1,322.0	235.0	8,669.0	267.0	2,006.0	3,465.0	1,513.0	774.0	3,377.0	5,002.0	26,630.0
1983	1,280.0	232.0	8,379.0	270.0	1,961.0	3,409.0	1,490.0	780.0	3,400.0	5,050.0	26,251.0
1984	1,239.0	223.0	8,341.0	273.0	1,954.0	3,426.0	1,481.0	786.0	3,478.0	5,092.0	26,293.0
1985	1,196.0	219.0	8,445.0	273.0	1,863.0	3,430.0	1,489.0	793.0	3,598.0	5,183.0	26,489.0
1986	1,177.0	216.0	8,580.0	276.0	1,840.0	3,449.0	1,507.0	808.0	3,710.0	4,293.0	25,856.0
1987	1,125.0	210.0	8,585.0	280.0	1,814.0	3,484.0	1,528.0	828.0	3,826.0	5,370.0	27,050.0
1988	1,078.0	200.0	8,569.0	283.0	1,810.0	3,540.0	1,539.0	839.0	3,979.0	5,424.0	27,261.0
1989	1,028.0	190.0	8,692.0	282.0	1,833.0	3,601.0	1,557.0	850.0	4,142.0	5,483.0	27,658.0
1990	995.0	181.0	8,932.0	285.0	1,911.0	3,727.0	1,587.0	892.0	4,402.0	5,567.0	28,479.0
1991	970.0	173.0	9,060.0	287.0	1,930.0	3,901.0	1,646.0	919.0	4,673.0	5,630.0	29,189.0
1992	930.0	163.0	8,902.0	288.0	1,953.0	3,992.0	1,663.0	941.0	4,900.0	5,723.0	29,455.0

**Table 2.4 - Number of Persons Employed
Italy, 1951-92 (thousands)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade (a)	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services (a)	Government Services	Total Employment
1947											
1948											
1949											
1950											
1951	8,978.3	490.2	3,505.2	118.4	1,137.8	2,082.7	658.7	111.6	969.1	1,828.2	19,880.1
1952	8,757.8	514.5	3,513.8	122.0	1,298.0	2,191.4	671.8	112.9	987.0	1,876.4	20,045.7
1953	8,539.3	519.8	3,590.9	125.1	1,471.2	2,287.5	684.1	118.8	1,004.2	1,918.1	20,259.0
1954	8,387.2	541.4	3,704.8	130.5	1,575.2	2,403.3	697.4	123.4	1,021.4	1,950.3	20,534.9
1955	8,059.3	565.9	3,716.2	134.1	1,653.1	2,513.1	726.6	128.0	1,041.8	1,988.3	20,526.5
1956	7,756.5	578.7	3,860.1	135.5	1,630.8	2,660.9	738.3	134.7	1,080.3	2,020.2	20,596.0
1957	7,396.5	585.4	4,017.0	138.4	1,664.6	2,794.5	761.2	140.9	1,120.8	2,067.2	20,686.5
1958	7,248.6	581.7	4,036.8	138.6	1,689.8	2,888.8	769.6	148.1	1,167.8	2,088.9	20,758.7
1959	7,123.7	586.1	4,094.8	140.6	1,714.7	2,912.8	781.1	151.3	1,154.7	2,128.5	20,788.4
1960	6,814.4	614.3	4,176.2	146.1	1,824.6	2,963.1	831.2	161.6	1,138.5	2,202.4	20,872.3
1961	6,427.0	622.0	4,296.7	148.9	1,947.7	3,035.6	888.8	165.3	1,119.3	2,255.1	20,906.3
1962	6,004.2	624.5	4,360.9	151.1	2,042.8	3,050.5	918.5	171.3	1,024.9	2,327.6	20,676.2
1963	5,454.8	636.8	4,443.9	153.1	2,117.3	3,073.8	949.5	179.7	946.0	2,385.7	20,340.8
1964	5,128.2	624.8	4,435.8	155.8	2,145.5	3,141.4	961.9	184.1	1,036.8	2,436.9	20,251.1
1965	5,111.9	605.2	4,354.1	159.2	1,996.6	3,110.8	980.2	185.6	938.2	2,479.8	19,921.6
1966	4,803.1	581.2	4,354.4	163.4	1,926.4	3,106.3	990.1	188.9	962.5	2,531.2	19,607.6
1967	4,693.1	590.5	4,471.6	169.0	1,955.7	3,185.1	997.5	190.3	1,005.8	2,587.4	19,845.9
1968	4,371.1	602.5	4,544.8	173.9	1,969.5	3,232.2	998.6	196.3	1,069.9	2,645.9	19,804.8
1969	4,131.7	603.0	4,644.1	177.3	2,024.7	3,332.9	1,012.0	199.8	1,079.9	2,703.7	19,909.1
1970	3,781.2	622.8	4,783.2	179.4	2,024.1	3,415.6	1,031.7	202.0	1,134.8	2,774.6	19,949.4
1971	3,763.5	625.6	4,865.5	183.2	1,911.6	3,296.7	1,038.8	206.8	1,133.6	2,902.4	19,927.7
1972	3,465.8	611.6	4,762.4	177.5	1,907.5	3,432.1	1,059.2	213.2	1,171.3	3,015.8	19,816.4
1973	3,407.5	610.6	4,902.4	179.3	1,905.0	3,524.6	1,103.6	224.7	1,251.3	3,134.0	20,243.0
1974	3,336.7	622.1	5,065.1	182.8	1,867.6	3,666.3	1,136.8	239.9	1,318.5	3,210.2	20,646.0
1975	3,209.1	617.5	5,034.6	183.3	1,803.0	3,766.8	1,158.3	255.4	1,356.7	3,284.2	20,668.9
1976	3,207.5	617.4	5,089.5	183.5	1,722.3	3,884.9	1,195.9	277.3	1,415.0	3,395.4	20,988.7
1977	3,094.4	623.2	5,207.5	185.2	1,716.9	3,910.5	1,205.4	292.7	1,454.1	3,511.0	21,200.9
1978	3,094.5	615.0	5,178.0	187.1	1,682.0	3,933.5	1,222.8	315.1	1,547.6	3,539.7	21,315.3
1979	3,044.4	620.5	5,266.4	187.1	1,668.8	4,046.2	1,243.5	335.6	1,633.7	3,594.6	21,640.8
1980	2,993.8	607.2	5,359.0	189.6	1,762.3	4,161.0	1,257.3	349.8	1,736.3	3,646.3	22,062.6
1981	2,845.2	597.2	5,152.8	192.0	1,791.8	4,272.6	1,293.0	359.5	1,822.7	3,733.5	22,060.3
1982	2,683.3	589.0	5,013.2	189.9	1,790.6	4,425.6	1,317.6	367.3	1,994.2	3,811.1	22,181.8
1983	2,745.3	562.7	4,819.3	187.4	1,778.5	4,540.7	1,353.0	373.9	2,081.8	3,881.9	22,324.5
1984	2,686.5	534.9	4,604.6	190.2	1,675.0	4,719.2	1,354.6	383.4	2,304.7	3,959.8	22,412.9
1985	2,580.7	502.3	4,567.3	192.9	1,651.5	4,789.2	1,364.8	388.7	2,537.1	4,038.2	22,612.7
1986	2,562.1	509.9	4,532.6	195.9	1,633.2	4,841.5	1,411.2	393.0	2,635.8	4,071.1	22,786.3
1987	2,507.8	510.0	4,483.4	199.6	1,615.0	4,924.7	1,439.3	398.1	2,670.2	4,129.4	22,877.5
1988	2,396.1	517.1	4,543.6	199.2	1,610.0	4,946.5	1,465.5	404.6	2,793.0	4,197.4	23,073.0
1989	2,276.6	531.8	4,553.3	196.2	1,598.3	4,919.0	1,492.4	414.1	2,884.0	4,221.5	23,087.2
1990	2,234.9	524.7	4,560.0	197.0	1,633.5	4,968.0	1,485.7	422.8	2,993.0	4,251.6	23,271.2
1991	2,236.3	497.8	4,466.6	195.1	1,673.8	5,048.8	1,492.1	433.8	3,104.4	4,301.1	23,449.8
1992	2,141.4	494.6	4,297.7	189.5	1,688.4	5,021.7	1,490.0	441.8	3,127.3	4,351.8	23,244.2

(a) hotels and restaurants are included with wholesale and retail trade.

**Table 2.5 - Number of Persons Employed
Netherlands, 1950-92 (thousands)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	Total Employment
1947											
1948											
1949											
1950	559.2	60.4	1,156.1	39.5	360.3	632.3	306.9	144.0	432.5	455.7	4,147.1
1951	551.7										
1952	543.2										
1953	535.6										
1954	526.2										
1955	514.9		1,261.4								
1956	501.7										4,535.6
1957	486.6										4,560.8
1958	468.7										4,518.5
1959	450.8										4,564.8
1960	441.3	66.8	1,358.1	42.6	436.5	746.4	340.9	257.0	397.3	564.4	4,651.4
1961	420.6	63.3	1,390.8	42.6	447.9	768.0	342.0	272.4	400.0	572.2	4,719.8
1962	417.8	61.8	1,427.0	42.3	463.2	788.1	346.6	284.4	407.6	577.6	4,816.4
1963	398.0	60.5	1,441.6	44.5	485.2	812.8	347.1	291.4	418.7	581.1	4,880.8
1964	385.7	57.9	1,464.5	45.4	512.8	831.6	346.0	299.1	429.3	580.9	4,953.3
1965	370.6	56.9	1,476.6	47.8	527.6	848.3	345.7	309.3	442.3	586.7	5,011.7
1966	348.9	50.0	1,473.0	48.9	533.3	866.5	348.0	324.7	453.2	600.4	5,046.9
1967	339.5	40.9	1,435.5	48.9	519.7	885.9	345.7	339.3	464.7	610.7	5,030.8
1968	315.0	33.2	1,431.9	49.2	542.2	915.0	344.3	358.2	479.1	622.2	5,090.2
1969	293.3	25.5	1,454.9	46.5	538.6	1,025.1	333.6	437.7	393.4	626.1	5,174.8
1970	281.0	21.1	1,454.9	46.6	552.6	1,027.5	337.3	459.4	416.1	634.7	5,231.1
1971	275.4	18.9	1,428.3	46.6	541.8	1,029.1	341.9	472.9	448.5	653.9	5,257.3
1972	273.5	15.6	1,378.7	47.8	517.8	1,018.8	335.5	476.6	474.4	673.3	5,212.0
1973	272.5	13.7	1,355.7	50.1	506.4	960.6	314.8	344.6	749.5	646.3	5,214.0
1974	282.1	10.3	1,347.3	46.5	508.8	971.4	319.8	379.1	760.5	667.6	5,293.4
1975	283.2	7.9	1,317.8	47.4	479.6	978.0	330.5	384.5	772.3	686.4	5,287.5
1976	285.6	7.6	1,262.2	47.2	479.2	976.9	321.6	391.9	821.5	719.8	5,313.5
1977	287.0	7.0	1,241.1	46.9	486.9	986.6	320.7	418.3	854.1	739.1	5,387.7
1978	283.3	7.2	1,222.6	47.3	498.5	1,009.0	324.1	439.8	868.4	748.6	5,448.6
1979	278.0	7.1	1,213.1	47.8	511.8	1,037.4	340.8	470.8	895.5	775.0	5,577.3
1980	276.2	7.3	1,201.1	48.3	518.2	1,055.4	348.0	494.0	932.0	808.9	5,689.5
1981	272.8	8.0	1,182.0	48.7	456.0	1,044.3	345.3	498.1	969.6	834.9	5,659.8
1982	277.1	8.4	1,139.1	48.9	403.0	1,017.9	340.7	494.3	990.6	853.0	5,572.9
1983	281.0	8.5	1,090.7	43.2	358.7	1,003.2	335.3	503.5	991.1	849.6	5,464.8
1984	282.9	8.6	1,051.6	48.0	354.7	995.4	334.0	534.8	988.1	855.5	5,453.5
1985	280.9	9.0	1,056.8	48.4	356.9	998.3	338.9	572.7	997.6	867.8	5,527.3
1986	284.2	9.6	1,081.6	47.8	370.1	1,024.1	348.4	617.6	1,050.9	895.4	5,729.6
1987	286.0	10.0	1,093.0	48.0	376.0	1,065.0	353.0	643.0	1,103.3	894.7	5,872.0
1988	288.0	10.0	1,107.0	47.0	386.0	1,096.0	355.0	684.0	1,112.3	914.7	6,000.0
1989	289.0	10.0	1,137.0	48.0	399.0	1,140.0	370.0	719.0	1,102.1	924.9	6,139.0
1990	286.0	10.0	1,160.0	46.0	406.0	1,195.0	377.0	759.0	1,128.8	947.2	6,315.0
1991	285.0	11.0	1,164.0	45.0	408.0	1,241.0	388.0	785.0	1,206.0	1,012.0	6,545.0
1992	288.0	11.0	1,155.0	45.0	402.0	1,275.0	398.0	803.0	1,168.4	980.6	6,526.0

**Table 2.6 - Number of Persons Employed
Spain, 1950-92 (thousands)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	Total Employment
1947											
1948											
1949											
1950	5,074.1	152.3	1,685.8	47.6	485.2	695.9	430.5	130.1	1,075.0	1,012.7	10,789.1
1951											
1952											
1953											
1954											
1955											
1956	4,849.4	183.1	2,092.2	60.4	719.3	837.5	522.5	157.9	903.6	1,229.9	11,555.7
1957	4,818.3	186.6	2,191.1	62.9	733.4	868.9	536.0	165.8	925.6	1,252.0	11,740.5
1958	4,762.8	189.2	2,291.8	65.5	774.9	902.3	566.0	172.9	961.7	1,263.6	11,950.7
1959	4,709.3	184.8	2,256.7	67.2	811.8	910.4	558.8	169.6	948.8	1,174.5	11,791.7
1960	4,626.7	176.0	2,263.9	68.9	745.7	920.5	552.6	164.2	901.5	1,192.5	11,612.4
1961	4,545.0	172.5	2,348.4	69.7	782.5	962.0	586.7	175.3	911.5	1,247.9	11,801.4
1962	4,473.0	169.0	2,460.8	70.6	853.3	999.4	606.4	188.4	840.6	1,356.2	12,017.5
1963	4,377.7	161.9	2,548.9	71.4	888.2	1,043.9	639.5	212.9	850.8	1,370.5	12,165.8
1964	4,174.8	154.0	2,637.7	74.9	909.3	1,181.1	651.8	248.9	849.6	1,327.9	12,210.1
1965	3,673.1	148.8	2,736.6	77.9	999.4	1,336.3	660.8	273.8	844.8	1,272.7	12,024.3
1966	3,947.7	140.2	2,813.8	76.6	1,025.7	1,390.0	674.3	271.0	877.3	1,262.5	12,478.9
1967	3,904.3	131.8	2,840.1	77.0	1,062.7	1,323.6	686.6	260.5	982.4	1,370.2	12,639.2
1968	3,886.1	126.0	2,898.2	78.0	109.1	1,260.5	700.1	256.0	1,107.7	1,446.8	11,868.4
1969	3,789.2	117.7	2,973.4	78.9	1,129.2	1,200.3	711.3	238.1	1,240.9	1,530.3	13,009.3
1970	3,696.3	114.2	3,044.5	78.8	1,150.9	1,143.0	720.3	230.2	1,395.6	1,662.4	13,236.3
1971	3,586.3	110.2	3,102.4	79.3	1,163.3	1,107.6	689.1	230.9	1,350.9	1,570.8	12,990.9
1972	3,246.2	104.2	3,197.6	80.4	1,282.0	1,768.0	723.8	392.9	1,157.9	1,322.3	13,275.4
1973	3,157.3	99.4	3,358.9	80.5	1,300.9	1,887.7	710.3	418.3	1,220.3	1,380.6	13,614.1
1974	3,022.1	97.5	3,454.0	80.7	1,337.6	1,947.5	725.1	465.9	1,204.6	1,405.2	13,740.1
1975	2,825.2	100.6	3,475.4	75.2	1,297.4	1,890.4	702.4	493.2	1,187.3	1,379.1	13,426.1
1976	2,735.4	100.0	3,440.5	76.9	1,292.6	1,869.9	726.6	498.4	1,243.3	1,490.2	13,473.7
1977	2,592.1	99.4	3,402.0	79.0	1,305.4	1,876.9	698.7	516.5	1,258.0	1,513.6	13,341.5
1978	2,461.9	97.4	3,343.1	79.2	1,259.6	1,851.3	679.2	493.9	1,257.9	1,543.3	13,066.7
1979	2,335.7	95.6	3,264.7	77.5	1,188.4	1,858.7	724.0	507.7	1,231.5	1,582.5	12,866.3
1980	2,141.9	93.8	3,220.9	78.8	1,099.6	1,778.1	701.5	487.9	1,183.8	1,595.7	12,382.1
1981	2,016.7	92.8	3,012.4	80.9	978.8	1,753.6	705.3	491.1	1,205.9	1,665.2	12,002.7
1982	1,969.6	91.3	2,808.6	87.1	964.3	1,727.0	712.9	489.5	1,256.7	1,698.7	11,805.6
1983	1,960.3	90.3	2,732.9	85.0	936.4	1,700.4	719.6	492.7	1,267.0	1,747.6	11,732.2
1984	1,889.5	88.0	2,602.3	83.0	814.3	1,633.9	696.7	486.2	1,288.4	1,802.9	11,385.2
1985	1,828.0	57.0	2,475.0	84.0	776.0	1,640.0	690.0	483.0	1,267.0	1,875.0	11,175.0
1986	1,646.6	55.6	2,513.5	82.7	831.3	1,743.1	686.2	508.4	1,292.0	1,939.0	11,298.4
1987	1,608.8	54.3	2,600.7	82.2	930.2	1,875.4	685.2	546.0	1,367.8	2,057.3	11,807.9
1988	1,591.1	52.6	2,651.7	82.2	1,025.4	1,940.3	689.2	575.5	1,447.2	2,151.7	12,206.9
1989	1,488.2	50.4	2,735.7	81.8	1,139.4	1,997.9	698.9	601.9	1,536.9	2,293.9	12,625.0
1990	1,437.9	48.1	2,825.8	80.0	1,230.4	2,078.3	713.0	635.7	1,598.5	2,423.9	13,071.6
1991	1,302.3	(a)	2,870.2	(a)	1,284.0	(b)	(b)	(b)	5,167.1	2,510.3	13,133.9
1992	1,211.5	(a)	2,796.4	(a)	1,206.3	(b)	(b)	(b)	5,212.7	2,554.4	12,981.3

(a) included with manufacturing

(b) included with community, social and personal services

**Table 2.7 - Number of Persons Employed
Sweden, 1950-92 (thousands)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	Total Employment
1947											
1948											
1949											
1950	774.4	15.4	931.8	23.8	267.4	335.7	246.9	65.1	246.8	392.7	3,300.0
1951											
1952											
1953											
1954											
1955											
1956											
1957											
1958											
1959											
1960	547.7	23.6	1,058.5	27.1	322.0	538.1	238.1	113.6	269.3	507.9	3,645.9
1961	521.2	24.0	1,084.3	27.1	323.3	547.7	238.6	119.6	272.8	515.8	3,674.5
1962	507.6	22.8	1,090.8	27.1	333.6	547.5	239.2	126.4	278.8	519.4	3,693.2
1963	463.9	21.2	1,090.6	27.2	344.1	551.2	239.8	137.9	285.5	550.1	3,711.4
1964	443.8	20.9	1,104.2	27.2	357.2	558.4	240.5	153.4	276.5	573.6	3,755.7
1965	419.3	20.9	1,109.5	27.2	377.1	562.0	241.2	161.8	271.8	588.8	3,779.6
1966	394.5	20.3	1,094.8	27.4	384.9	559.7	243.7	172.9	269.0	613.4	3,780.6
1967	374.7	19.2	1,058.8	27.1	399.3	549.0	244.6	179.2	253.2	645.2	3,750.1
1968	348.8	18.2	1,041.2	27.1	403.6	572.2	247.4	182.6	254.2	689.2	3,784.5
1969	331.6	17.6	1,059.6	27.4	398.7	580.1	248.0	187.8	255.9	740.1	3,846.8
1970	326.1	17.9	1,075.8	27.9	369.6	578.2	246.2	197.0	260.9	812.8	3,912.4
1971	310.1	17.2	1,040.0	28.6	344.9	582.6	251.5	208.6	255.4	865.9	3,904.8
1972	290.8	16.9	1,023.7	28.6	347.5	575.1	255.1	214.1	255.5	910.3	3,917.6
1973	274.5	17.0	1,039.1	29.0	340.8	569.8	256.7	214.4	249.9	941.1	3,932.3
1974	270.8	17.0	1,061.4	29.5	331.6	580.3	261.9	217.5	244.2	996.1	4,010.3
1975	261.7	17.8	1,070.0	29.8	325.3	597.4	267.0	226.5	247.5	1,046.3	4,089.4
1976	250.7	17.7	1,066.4	30.0	314.9	598.6	268.2	225.2	243.8	1,095.7	4,111.1
1977	242.6	16.9	1,029.3	30.6	298.3	597.5	270.2	229.2	246.4	1,142.5	4,103.5
1978	242.6	15.6	1,000.1	30.6	297.2	587.6	270.4	233.0	248.5	1,201.6	4,127.3
1979	237.0	16.2	1,002.4	31.9	290.1	593.6	273.2	239.2	243.6	1,253.6	4,180.8
1980	231.3	15.7	1,001.6	32.5	301.7	588.8	280.4	240.0	242.2	1,299.6	4,233.8
1981	222.8	15.2	972.2	32.9	299.1	586.2	281.7	240.4	244.9	1,345.2	4,240.6
1982	218.7	14.3	933.8	33.8	293.0	578.3	288.1	247.2	248.7	1,376.7	4,232.6
1983	214.0	13.6	915.9	34.2	279.9	581.4	283.5	258.5	248.8	1,412.5	4,242.3
1984	211.6	13.1	924.0	33.7	272.2	582.7	282.4	271.9	244.7	1,441.3	4,277.6
1985	206.9	13.0	944.1	34.1	272.0	592.5	288.9	276.4	248.6	1,445.2	4,321.7
1986	201.4	12.2	948.0	34.1	273.1	593.1	288.3	310.5	248.8	1,438.9	4,348.4
1987	181.0	11.1	968.3	34.0	279.9	603.3	289.1	326.2	255.3	1,434.9	4,383.1
1988	178.4	10.8	986.7	33.3	280.9	620.1	289.1	339.7	255.2	1,449.0	4,443.2
1989	169.8	12.1	979.8	33.5	291.1	642.5	293.1	358.3	257.6	1,470.3	4,508.1
1990	167.8	12.1	953.0	33.0	299.2	638.0	297.9	378.8	264.2	1,505.7	4,549.7
1991	160.0	10.0	872.0	32.0	297.0	621.0	300.0	385.0	267.0	1,538.0	4,482.0
1992	155.0	10.0	796.0	32.0	268.0	595.0	288.0	377.0	268.0	1,493.0	4,282.0

**Table 2.8 - Number of Persons Employed
United Kingdom, 1948-92 (thousands)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	Total Employment
1947											
1948	1,385.2	887.8	7,412.3	310.3	1,387.3	3,418.6	1,727.2	726.3	1,892.7	3,459.9	22,607.6
1949	1,381.7	885.8	7,548.3	323.6	1,376.1	3,518.7	1,725.3	744.3	1,830.6	3,351.3	22,685.7
1950	1,365.6	863.7	7,737.6	341.6	1,375.2	3,553.7	1,730.0	736.1	1,815.4	3,372.8	22,891.9
1951	1,329.9	865.7	7,914.6	350.2	1,388.2	3,610.0	1,693.3	744.3	1,784.3	3,493.1	23,173.7
1952	1,301.1	885.8	7,797.6	359.6	1,380.8	3,632.5	1,699.9	754.1	1,817.7	3,564.0	23,193.1
1953	1,276.9	890.8	7,917.4	359.6	1,386.4	3,702.6	1,676.4	763.9	1,772.2	3,564.9	23,311.2
1954	1,264.3	879.8	8,133.4	360.6	1,407.8	3,803.9	1,657.6	786.7	1,777.5	3,600.7	23,672.4
1955	1,258.5	873.8	8,318.0	364.4	1,440.4	3,899.0	1,653.8	806.3	1,777.5	3,583.7	23,975.4
1956	1,222.8	868.8	8,328.4	363.4	1,493.5	3,997.8	1,665.1	812.8	1,771.5	3,625.0	24,149.2
1957	1,215.9	876.8	8,333.2	365.3	1,473.9	4,059.1	1,652.0	843.9	1,740.4	3,585.5	24,146.0
1958	1,198.6	862.7	8,194.3	361.5	1,451.6	4,054.1	1,636.9	853.7	1,737.4	3,563.1	23,913.9
1959	1,189.4	843.7	8,227.6	363.4	1,482.3	4,135.4	1,624.7	901.0	1,758.6	3,584.6	24,110.7
1960	1,168.7	776.5	8,566.3	360.6	1,524.2	4,239.2	1,618.1	923.8	1,762.4	3,599.9	24,539.7
1961	1,131.9	744.4	8,673.8	369.1	1,582.0	4,271.7	1,641.6	953.2	1,773.0	3,644.7	24,785.4
1962	1,092.7	719.3	8,567.2	374.8	1,618.3	4,328.0	1,646.3	981.0	1,825.3	3,722.8	24,875.8
1963	1,083.5	691.2	8,443.6	384.3	1,655.6	4,358.1	1,624.7	1,026.7	1,837.4	3,820.6	24,925.6
1964	1,040.9	665.1	8,586.3	390.0	1,736.7	4,376.8	1,612.5	1,062.6	1,911.6	3,843.9	25,226.4
1965	982.2	632.0	8,696.6	397.6	1,778.6	4,388.1	1,600.3	1,085.4	1,927.5	3,941.7	25,430.0
1966	944.4	583.9	8,726.0	410.8	1,815.8	4,372.2	1,574.9	1,100.5	1,985.5	4,072.5	25,586.5
1967	909.7	558.4	8,461.6	407.7	1,752.0	4,225.7	1,571.9	1,114.7	1,986.1	4,230.3	25,218.0
1968	880.3	492.9	8,393.7	397.6	1,739.3	4,169.1	1,554.6	1,154.1	1,956.1	4,323.2	25,060.9
1969	843.5	447.9	8,501.1	382.4	1,699.9	4,162.8	1,529.3	1,188.3	1,951.0	4,363.1	25,069.3
1970	808.9	420.3	8,484.9	368.2	1,591.5	4,120.2	1,567.8	1,255.6	1,876.6	4,458.0	24,951.9
1971	758.4	406.0	8,212.3	347.9	1,536.2	4,029.7	1,569.8	1,283.8	1,861.5	4,584.8	24,590.5
1972	733.2	388.6	7,942.8	326.6	1,620.2	4,377.8	1,555.6	1,499.8	1,336.7	4,743.6	24,525.0
1973	737.4	372.2	7,993.4	314.4	1,779.7	4,523.0	1,545.5	1,574.8	1,388.9	4,881.5	25,110.9
1974	704.9	357.9	8,043.1	349.9	1,718.0	4,481.0	1,577.9	1,620.5	1,420.5	4,923.4	25,197.2
1975	687.0	361.0	7,654.0	355.0	1,617.0	4,516.0	1,582.0	1,622.0	1,441.0	5,218.0	25,053.0
1976	685.0	357.0	7,411.0	354.0	1,577.0	4,504.0	1,539.0	1,622.0	1,466.0	5,320.0	24,835.0
1977	684.0	359.0	7,461.0	349.0	1,504.0	4,555.0	1,533.0	1,642.0	1,499.0	5,279.0	24,865.0
1978	680.0	361.0	7,427.0	341.0	1,524.0	4,591.0	1,551.0	1,692.0	1,552.0	5,296.0	25,015.0
1979	666.0	359.0	7,395.0	349.0	1,590.0	4,729.0	1,567.0	1,767.0	1,586.0	5,384.0	25,392.0
1980	654.0	361.0	7,081.0	353.0	1,617.0	4,818.0	1,580.0	1,837.0	1,677.0	5,349.0	25,327.0
1981	639.0	351.0	6,365.0	350.0	1,526.0	4,705.0	1,526.0	1,901.0	1,663.0	5,318.0	24,344.0
1982	632.0	338.0	6,005.0	336.0	1,474.0	4,671.0	1,477.0	1,976.0	1,734.0	5,265.0	23,908.0
1983	622.0	323.0	5,664.0	322.0	1,461.0	4,639.0	1,439.0	2,067.0	1,784.0	5,306.0	23,627.0
1984	615.0	301.0	5,579.0	313.0	1,509.0	4,851.0	1,460.0	2,174.0	1,957.0	5,476.0	24,235.0
1985	616.0	284.0	5,561.0	303.0	1,500.0	4,885.0	1,432.0	2,330.0	2,131.0	5,494.0	24,536.0
1986	603.0	244.0	5,430.0	295.0	1,484.0	4,880.0	1,411.0	2,444.0	2,198.0	5,573.0	24,562.0
1987	591.0	210.0	5,395.0	289.0	1,559.0	4,920.0	1,442.0	2,585.0	2,399.0	5,685.0	25,075.0
1988	580.0	188.0	5,476.0	288.0	1,645.0	5,070.0	1,464.0	2,792.0	2,668.0	5,746.0	25,917.0
1989	566.0	178.0	5,512.0	283.0	1,793.0	5,231.0	1,521.0	3,050.0	2,927.0	5,717.0	26,778.0
1990	568.0	189.0	5,494.0	278.0	1,829.0	5,331.0	1,520.0	3,245.0	3,218.0	5,697.0	27,369.0
1991	560.0	173.0	5,118.2	276.0	1,664.7	5,200.7	1,477.2	3,176.0	3,366.5	5,482.0	26,494.3
1992	540.8	150.9	4,908.1	258.8	1,524.0	5,119.8	1,447.4	3,133.6	3,545.2	5,249.0	25,877.4

**Table 2.9 - Number of Persons Employed
United States, 1950-90 (thousands)**

Year	Agriculture	Mining	Manufacturing	Public Utilities	Construction	Wholesale and Retail Trade	Transport and Communication	Finance, Insurance and Real Estate	Community, Social and Personal Services	Government Services	Total Employment
1947											
1948											
1949											
1950	6,834	959	15,639	556	3,452	11,685	3,708	2,082	8,707	8,884	62,506
1951	6,441	974	16,866	568	3,687	12,232	3,906	2,189	8,948	10,442	66,253
1952	6,284	951	17,174	574	3,681	12,437	3,913	2,283	9,008	11,190	67,495
1953	6,091	912	17,998	587	3,628	12,578	3,949	2,386	9,219	11,216	68,564
1954	6,112	837	16,774	592	3,512	12,456	3,729	2,488	9,229	11,211	66,940
1955	5,911	841	17,327	597	3,608	12,773	3,781	2,572	9,775	11,286	68,471
1956	5,623	879	17,674	605	3,752	13,181	3,879	2,663	10,298	11,524	70,078
1957	5,377	876	17,577	609	3,669	13,292	3,862	2,714	10,577	11,825	70,378
1958	5,221	782	16,234	624	3,557	13,206	3,578	2,764	10,856	11,878	68,700
1959	5,066	749	16,967	619	3,696	13,468	3,582	2,820	11,242	12,068	70,277
1960	4,873	728	17,088	623	3,655	13,774	3,587	2,903	11,622	12,412	71,265
1961	4,800	694	16,636	624	3,630	13,677	3,481	2,962	12,047	12,775	71,326
1962	4,662	675	17,199	620	3,710	13,850	3,482	3,025	12,458	13,143	72,824
1963	4,445	656	17,320	622	3,792	13,993	3,478	3,100	12,760	13,408	73,574
1964	4,189	651	17,614	626	3,913	14,400	3,527	3,179	13,208	13,855	75,162
1965	4,012	654	18,398	635	4,064	14,884	3,597	3,285	13,595	14,300	77,424
1966	3,712	650	19,579	642	4,143	15,417	3,727	3,378	14,232	15,524	81,004
1967	3,592	634	19,811	656	4,105	15,689	3,818	3,503	14,668	16,385	82,861
1968	3,550	629	20,154	667	4,236	16,133	3,870	3,672	15,152	16,899	84,962
1969	3,449	639	20,574	684	4,432	16,771	3,973	3,830	15,724	17,236	87,312
1970	3,383	642	19,713	701	4,374	17,119	4,013	3,954	15,900	17,321	87,120
1971	3,324	630	18,860	712	4,458	17,445	3,978	4,049	16,215	17,309	86,980
1972	3,374	638	19,328	726	4,687	17,907	4,019	4,184	16,939	17,309	89,111
1973	3,450	654	20,405	742	5,041	18,709	4,142	4,444	17,668	17,569	92,824
1974	3,535	715	20,387	752	5,039	19,145	4,214	4,584	18,103	17,940	94,414
1975	3,462	769	18,658	741	4,529	19,181	4,067	4,660	18,508	18,303	92,878
1976	3,493	806	19,375	741	4,618	19,893	4,080	4,772	19,147	18,303	95,228
1977	3,375	847	20,113	754	4,969	20,761	4,202	4,988	20,024	18,482	98,515
1978	3,425	903	21,000	784	5,550	21,880	4,419	5,359	21,122	18,891	103,333
1979	3,453	976	21,530	819	5,877	22,633	4,626	5,652	21,998	19,683	107,247
1980	3,547	1,068	20,800	834	5,679	22,755	4,626	5,828	22,656	20,122	107,915
1981	3,522	1,186	20,699	866	5,504	23,034	4,651	5,946	23,500	20,064	108,972
1982	3,475	1,167	19,308	881	5,173	22,953	4,561	6,065	24,143	20,059	107,785
1983	3,520	987	18,934	885	5,273	23,466	4,486	6,252	25,057	20,197	109,057
1984	3,436	998	19,888	900	5,828	24,795	4,639	6,499	26,481	20,500	113,964
1985	3,242	947	19,700	914	6,186	25,577	4,703	6,753	27,595	20,915	116,532
1986	3,224	800	19,465	920	6,400	26,180	4,712	7,065	28,553	21,235	118,554
1987	3,290	744	19,511	926	6,532	26,980	4,852	7,374	30,020	21,650	121,879
1988	3,301	746	19,940	936	6,741	27,715	4,998	7,519	31,523	21,861	125,279
1989	3,320	714	19,990	943	6,790	28,519	5,086	7,558	33,009	22,228	128,157
1990	3,316	737	19,734	956	6,785	28,521	5,221	7,609	34,297	22,679	129,856
1991											
1992											

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